Barbados Drug Information Network Report





Prepared by:

The National Council on Substance Abuse

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1. Key Findings

1.1 Prevention and Drug Education

National Council on Substance Abuse

- The National Council on Substance Abuse (NCSA) is the lead agency responsible for drug education across the island.
- Males and females across the lifespan (approx. seven years and over) took part in NCSA's interventions in 2021.
- The Community Programme accounted for the largest number of persons reached by the NCSA, distantly followed by the Secondary School, Primary School and Counselling Programmes respectively.
- The Counselling Programme had the smallest reach given that its treatment services are delivered on an individual basis.

Edna Nicholls Centre

- Eleven students (nine males, two females) were admitted to the Edna Nicholls Centre in 2021.
- The number of students admitted to the Centre was significantly reduced due to the ongoing COVID-19 pandemic which resulted in no admissions during the Hilary term of the 2020/2021 academic year and the Michaelmas term of the 2021/2022 academic year.
- Nine of the 11 students admitted to the Centre were between the ages of 13 and 15 years.
- Five students (45.4%) tested positive for marijuana use, all of whom were males between 13 and 15 years.

1.2 Treatment

Psychiatric Hospital

- Approximately one-third (35%) of persons admitted to the Psychiatric Hospital in 2021 received drug-related treatment.
- Males accounted for 90% of the persons seeking drug treatment.
- Just under two-thirds (64%) of the persons seeking drug treatment were age 40 and under.
- Co-morbid diagnoses which included substance use disorders were more common among males.
- Thirty-five persons received drug treatment from the Hospital's Day Programme in 2021, the majority of whom were males, 40 years of age and under.
- Eight out of every 10 persons (80%) receiving treatment in the Day Programme were treated for single drug use. The remainder (20%) were treated for poly drug use.
- Alcohol, marijuana and crack cocaine were the primary drugs for which Day Programme clients sought treatment.
- Alcohol, marijuana, crack cocaine and ecstasy were the four substances used by Day Programme clients in the 12 months and 30 days preceding treatment entry.

- Seventy-six young persons (ages 17 and under) were admitted to the Thrive Family Centre in 2021, more than half (57%) of whom were males.
- Three of the persons admitted to the Thrive Family Centre received drug-related diagnoses, These three individuals were males, two were between the ages of 14 and 17 and one was in the 10 to 13 age group.
- Marijuana was the primary substance for which all persons with drug-related diagnoses were treated at the Thrive Family Centre in 2021.

Substance Abuse Foundation

- The majority of clients treated at the Substance Abuse Foundation (SAF) in 2021 were males (83%) and persons age 40 or younger (60.2%).
- Most clients (79.5%) sought treatment for poly drug use.
- Crack cocaine, marijuana and alcohol were the top three primary substances for which treatment was sought at the SAF.
- 'Self-referral' was the single most common referral source for SAF clients in 2021, accounting for 47.7% of admissions.
- Reports of lifetime drug use mainly included traditional drugs such as alcohol, marijuana, crack cocaine, nicotine (tobacco) and cocaine powder.
- Lifetime use of non-traditional drugs such as ecstasy, mushrooms, LSD, Gamma Hydroxybutyrate (GHB) and various prescription medications was noted but was much less common.
- Males and persons in the 40 and under age category were more likely to report the use of non-traditional substances during their lifetime.

Centre for Counselling Addiction Support Alternatives

- Twelve persons received drug-related treatment at the Centre for Counselling Addiction Support Alternatives (CASA) in 2021, nine of whom were males.
- Most persons (8) were 30 years and under.
- Encouragement from family and friends was the most common reason for which persons sought treatment at CASA in 2021.
- Nine of the 12 clients received treatment for single drug use.
- Marijuana (8) and alcohol (4) were the only primary drugs for which treatment was sought.
- Only one client reported having a comorbid mental health disorder.

National Council on Substance Abuse

- Thirty-five persons received counselling at the National Council on Substance Abuse (NCSA) in 2021 the majority of whom (71%) were treated for substance use issues.
- Most persons seeking drug treatment at NCSA were males, 20 years of age and younger.

- The justice system/police department ¹was the main referral source for persons receiving drug treatment at the NCSA in 2021.
- While persons primarily sought treatment for single drug use, there was a small percentage (4%) of clients who were treated for poly drug use.
- Marijuana (92%) and alcohol (8%) were the only two primary drugs for which treatment was sought at the NCSA.
- Marijuana and alcohol were the drugs most commonly used by clients during the 30 days prior to entering treatment.

1.3 Supply Control

Barbados Police Service

- Drug offences accounted for 18% of all offences recorded by the Barbados Police Service (TBPS) during 2021.
- The majority of drug offenders were males and persons under the age of 40.
- Barbadians accounted for nine out of every 10 persons (91%) charged with drug offence.
- The majority (88.1%) of drug offences were cannabis-related.
- There was a proportionately smaller number of offences involving cocaine (10.8%) and ecstasy/methamphetamine (1.0%).
- The most common cannabis-related offences were "Possession of Cannabis" (37.0%), "Trafficking Cannabis" (25.9%) and "Offering to Supply" (25.2%).
- Cannabis, in plant, compressed and loose forms, was the primary drug seized by TBPS.
- The majority of cannabis plant seizures took place in St. John and St. Joseph.
- Six of the 21 deportees returned to Barbados in 2021 were deported for drug-related offences four were male and two were female.
- The majority of drug-related deportees were under the age of 50.
- All of the 2021 drug-related deportees were returned to Barbados from extra-regional countries, namely: Canada, the United Kingdom and the United States of America.
- TBPS recorded one arrest for money laundering in 2021, but this was not drug-related.

Criminal Justice Research and Planning Unit

- Data compiled by the Criminal Justice Research and Planning Unit (CJRPU) revealed that, during 2021, 333 persons were sentenced for various drug offences in the Magistrates' Courts of Barbados.
- The majority of drug-related cases involved cannabis offences.
- "Intent to Supply", "Trafficking" and "Possession" were the most common cannabis offences tried.
- "Reprimanded and Discharged" (R&D), "Convicted, Reprimanded and Discharged" (CRD) and "Fine" were the most common sentence outcomes for cannabis-related offences.
- "Intent to Supply", "Trafficking" and "Possession of Apparatus" were the top three cocainerelated charges adjudicated at the Magistrate Court level.

¹ The majority of referrals within this category (justice system/police department) were from the court system.

- "CRD", "R&D" and "Fine" were the three most common sentence outcomes for cocainerelated offences; however, for cases involving "Possession of Apparatus", "Imprisonment" was most likely.
- There were two methamphetamine-related offences tried within the Magistrates' Courts: "Possession" which resulted in a "Bond" and "Intent to Supply" which received a sentence of "R&D".
- There were 20 offences involving unspecified controlled drugs. These offences included "Possession", "Trafficking", "Intent to Supply" and "Possession of Apparatus". "CRD" and "R&D" were the most common sentence outcomes for all but the lone "Possession of Apparatus" charge, which resulted in a "Bond".

Government Industrial School

- Forty-seven wards were remanded/committed to the Government Industrial School (GIS) in 2021, the majority of whom were males (68%) and persons between 13 and 15 years (96%).
- Of the 52 offences recorded by the GIS in 2021, two were drug-related.
- Both drug-related offences were "Possession of a Controlled Substance". In each case, the controlled substance was marijuana.
- Both wards charged with "Possession of a Controlled Substance" were 15 year old males.
- "Wandering" was the most common offence among female wards.
- "Assault Occasioning Actual Bodily Harm" and "Criminal Damage" were the two most common offences among male wards, recorded with near equal frequency.
- Ten wards were drug-tested in 2021, three of whom (30%) tested positive for marijuana use.
- All three wards testing positive for marijuana use were male. Two were age 15 and one was age 14.

1.4 Trend Analysis

- The NCSA observed a marked reduction in the number of persons reached by its drug prevention interventions since the onset of the COVID-19 pandemic.
- School interventions have traditionally accounted for the majority of drug prevention programming conducted by the Council, however, the NCSA's community interventions had the greatest reach in 2021. This is likely due to the reliance on online schooling and the associated challenges during the year.
- There was a significant reduction in the number of students admitted to the Edna Nicholls Centre following the onset of the pandemic. This is also likely due to the reliance on online schooling.
- Students testing positive for marijuana use at the Edna Nicholls Centre between 2017 and 2021 were consistently found to be male and between the ages of 14 and 15 years.
- The number of persons seeking drug treatment in Barbados continuously decreased from 2020 onwards, coinciding with the onset of the pandemic.

- Males and persons 40 years and under were found to be the primary treatment seekers in Barbados between 2019 and 2021.
- The number of persons seeking treatment for poly drug use has increased to just over 50% since 2020. In 2019, just under one-quarter (23.8%) were treated for the use of multiple substances.
- Between one-fifth and one-quarter of patients admitted to the Psychiatric Hospital during the period 2018-2021 received co-morbid diagnoses which included a substance use disorder.
- Males between 20 and 39 years accounted for the majority of persons charged with drug offences between 2017 and 2021.
- Cannabis-related offences far outranked all other drug offences between 2017 and 2021.
- "Possession of Cannabis" was the single most common cannabis offence between 2017 and 2021.
- "Possession of Cannabis" charges steadily declined from 2019 onwards while the percentage of "Trafficking" and "Offering to Supply" charges simultaneously increased. These changes coincide with changes in cannabis-related legislation which took place between 2019 and 2021 and may therefore be a reflection of fewer persons being charged with small-scale possession (likely intended for personal use).
- In 2019, 578 cannabis possession cases were adjudicated in the Magistrates' Courts, and this declined to 165 in 2021. This reduction also coincides with the changes in cannabis-related legislation, particularly the introduction of a fixed penalty (decriminalization) for the possession of 14 grammes or less of cannabis.

1.5 Recommendations to Improve National Response to Drug Situation

- Efforts should be made to investigate the reasons why NCSA has not observed an increase in persons referred for assessment and counselling despite the provision for such referrals within the Drug Abuse (Prevention and Control) (Amendment) Act, 2021. Discussions should also be held with the relevant stakeholders, with a special emphasis on the Barbados Police Service, to ensure that those found in possession of 14 grammes or less of marijuana and who meet the necessary criteria² are diverted to the NCSA as outlined in the Act.
- 2. Studies should be conducted to investigate the impact of relaxed marijuana legislation on patterns of marijuana use in Barbados. These should focus on both the general population as well as specific sub-populations, including adolescents and other vulnerable groups. Large, nationally representative surveys and small-scale rapid assessments can be used, as can quantitative and qualitative methodologies. The results from such studies should be incorporated into an evidence-based approach to prevention programming and policy development.

² In accordance with the Drug Abuse (Prevention and Control) (Amendment) Act, 2021, persons found in possession of 14 grammes or less of marijuana should be referred to the NCSA for assessment and/or counselling if 1) they are under the age of 18, OR 2) are 18 years and over, deemed by the Police to be dependent on the substance *and* consent to assessment/counselling at the Council.

- 3. Efforts should be made to increase the number of persons seeking treatment for substance use disorders, such that they return to or exceed pre-COVID numbers. These should include:
 - a. Identifying and addressing barriers to treatment in order to ensure the appropriate allocation of resources.
 - b. Giving special consideration to relocating the Drug Rehabilitation Unit from its current location at the Psychiatric Hospital and/or decentralizing the assessment and referral process for residential treatment. This should reduce the impact which the stigma associated with the Hospital has on treatment seeking and create easier access to treatment resources.
 - c. A public education campaign regarding addiction, treatment options and the treatment process. The lack of knowledge regarding these areas is a well-documented barrier. Messages should also focus on destigmatizing addiction.
- 4. Efforts should be made to address the high proportion of persons in the 40 and under age category who are involved in the drug situation:
 - a. There should be an increased focus on this population by professionals in the prevention, treatment and rehabilitation sectors. These specialists should utilize evidence-based interventions designed to meet the specific needs of this age group.
 - b. The Barbados Population Policy should include the areas of prevention, treatment and rehabilitation, as the 40 and under age group accounts for a large percentage of the workforce. More specifically, the Policy should include a component that speaks to: 1) the delivery of drug prevention education and other drug prevention initiatives; 2) increasing the availability of, and access to, treatment for drug use disorders and 3) the provision of rehabilitation and diversion programmes for drug offenders.
- 5. In an attempt to strengthen the provision of treatment and prevention services, a Certification Board should be established and registration/certification made mandatory for professionals within these fields. The Certification Board should be responsible for identifying and enforcing certification requirements and should also mandate continuing education and re-registration at set intervals to ensure that these specialists remain current within their respective fields.
- 6. There should be continued efforts to increase the timeliness of BARDIN submissions from Network members. These can include:
 - a. Leveraging buy-in from senior government officials
 - b. Educating Network members about the utility of BARDIN reports and data in their everyday practice
 - c. Hosting semi-annual Network meetings where members can share new developments in the field, be exposed to data collection training and ultimately develop a common identity and a collective purpose as it pertains to BARDIN.
- 7. Consideration should be given to expanding the BARDIN indicators to include:
 - a. The number of drug-related deaths and accidents/injuries
 - b. The number of persons charged with driving while under the influence of alcohol and the sentence outcomes for such offences brought before the law courts.
 - c. The results of drug/substance identification analyses conducted by the Forensic Sciences Centre.

2 Introduction

The Barbados Drug Information Network (BARDIN) is the mechanism used by the National Council on Substance Abuse (NCSA) to collect and disseminate data on the island's drug situation. Officially relaunched in 2011, BARDIN seeks to:

- Strengthen the capacity of Barbados to respond to changing drug use trends
- Provide current epidemiological and other information on substance abuse and regularly update this information
- Identify trends in drug consumption and offences related to illicit drugs
- Provide relevant information for the planning, evaluation and management of drug control programmes

BARDIN reports are prepared annually, covering the calendar year (January 1 to December 31), and they are based on secondary data ³collected from stakeholder agencies in the demand reduction and supply control sectors. As such, the present report covers the period January 1 to December 31, 2021, and includes data from: the NCSA, the Edna Nicholls Centre, the Psychiatric Hospital, the Substance Abuse Foundation (SAF), the Centre for Counselling Addiction Support Alternatives (CASA), the Barbados Police Service (TBPS), the Government Industrial School (GIS), and the Criminal Justice Research and Planning Unit (CJRPU).

Like previous editions, this report is divided into three broad sections: Prevention and Drug Education, Treatment and Rehabilitation, and Supply Control. Each section provides agency-specific data, which is primarily presented using percentages. However, in some instances, raw numbers are used due to the small numbers in reporting categories.

It should be noted that this report is the second in the BARDIN series to cover a period marked by the COVID-19 pandemic, and the data is reflective of the impact which the associated restrictions had on the operations of contributing agencies. Much like the 2020 report, there was a marked reduction in the number of persons reached by the agencies – particularly those within the prevention and treatment sectors – when compared to that of previous years.

There is also a noticeable absence of data from the Inmate Drug Rehabilitation and Counselling (IDRC) Programme at Dodds Prison. This is due to the fact that the Prison had a COVID-19 outbreak during the months of January to February, 2021, and the COVID-19 protocols that followed restricted the conduct of individual and group sessions with inmates throughout the year.

Despite the operational challenges and reduced reach of contributing agencies reflected in this report, the document remains an important tool in programme and policy development. It also has the potential to highlight areas for further investigation.

³ Secondary data is data that was collected by an individual or agency other than the user.

3 Prevention and Drug Education

3.1 National Council on Substance Abuse

Drug Prevention Programming

The National Council on Substance Abuse is the organization with lead responsibility for drug prevention programming in Barbados. Within its role, the NCSA conducts a range of interventions at the school and community levels. The Council also provides counselling services and conducts research on the drug situation.

Table 1 presents the distribution of persons reached by the NCSA during the period January 1 to December 31, 2021. The data is disaggregated by programme, and age and gender details are provided where available. Mass-based events are not included in the totals given their ability to artificially inflate the number of persons taking part in the Council's programmes and interventions.

From the Table, it can be seen that males and females across the lifespan (approx. 7 years and over) took part in NCSAs initiatives during the year. The data also shows that community-based efforts had the greatest reach followed by the Secondary School, Primary School and Counselling Programmes. This distribution differs from that seen in previous reports, as the Primary School Programme traditionally accounts for the majority of persons reached by the Council.

The change in distribution is largely attributable to the constraints of the COVID-19 pandemic. While all aspects of the Council's functioning were affected by the accompanying restrictions, the Primary School Programme was particularly impacted by the heavy reliance on online schooling. This led to an intense effort to convert the Primary School Programme into an online format. This was the main focus for the Officer in charge of the Programme during the said year.

It should be noted that the Secondary School and Community Programmes also adapted to the online requirements necessitated by the pandemic, and made use of virtual sessions to ensure their continued functioning during the target period.

With regards to the Counselling Programme, this continued to have the smallest reach due to the nature of its services which are provided on an individual basis.

Intervention	Age Range/ Population Targeted	No. of Males Targeted	No. of Females Targeted	Total no. of Persons Targeted
Primary School Programme				
Cub Scouts	7-11 years	206	-	206
TOTAL		206	-	206
Secondary School Programme				
Drugs & Life Skills Awareness Programme	13-15 years	167	178	345
Vaping Awareness Programme	13-15 years	47	59	106
TOTAL				237
Community Programme				
Edna Nicholls Centre ⁴	11-16 years	9	2	11
New Horizon Substance Abuse Prevention Class Students	11-16 years	7	2	9
New Horizon Substance Abuse Prevention Class Teachers	Various ages	1	3	4
Project SOFT Transitional Camp	11 years	-	-	92
Prevention 1 st Club Parents	Various ages	-	-	150
Prevention 1 st Club Children	11-12 years	-	-	92
Drug Education Sessions	Various ages	-	-	654
Social Work Interns	Various ages	-	3	3
SPORTS – Not Drugs Programme	21-65 years	56	39	95
Mass-based Events (Radio, TV, Social Media Interviews)	Various ages	-	-	-
TOTAL		-	-	1110
Counselling Programme				
Counselling	11-55 years	39	6	45
TOTAL		39	6	45

Table 1: Persons Targeted by NCSA's Programmes/Interventions during 2021 by Age and Gender

Source: The National Council on Substance Abuse

⁴ The aim of the Edna Nicholls Out-of-School Programme is to provide rehabilitative programmes for secondary school students who have been suspended, referred or expelled from school.

3.2 Edna Nicholls Centre

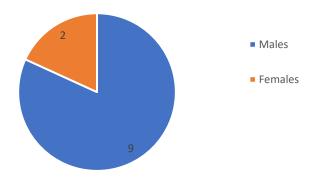
Eleven students were admitted to the Edna Nicholls Centre during the period January 1 to December 31, 2021 (See Table 2). The admission numbers were significantly lower than in previous years due to the ongoing COVID-19 pandemic and the associated national lockdowns and transition to online schooling during the period.

Term	Academic Year	Number of Students
Term 2	2020/2021	0 students due to COVID-19
January to March 2021		pandemic
Term 3	2020/2021	11
May to July 2021		
Term 1	2021/2022	0 students due to COVID-19
September to December 2021		pandemic

Source: Edna Nicholls Centre

As in previous years, the majority of persons admitted to the Centre in 2021 were males between the ages of 13 and 15 years (See Figures 1 and 2).

Figure 1: Gender Distribution of Students Admitted to the Edna Nicholls Centre in 2021



Source: Edna Nicholls Centre

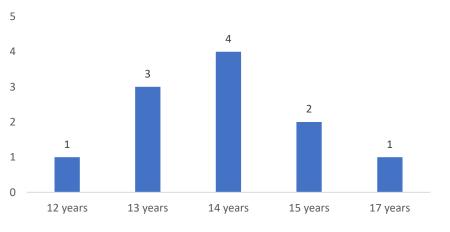


Figure 2: Age Distribution of Students Admitted to the Edna Nicholls Centre in 2021

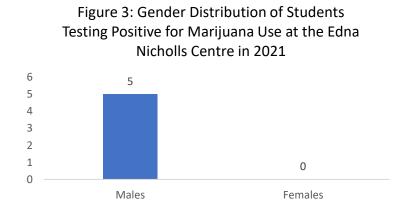
Source: Edna Nicholls Centre

Drug Testing

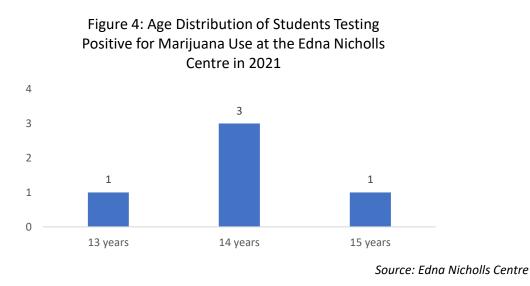
All eleven students were tested for marijuana and cocaine use on admission to the Centre. Just under half (5/11 students – 45.4%) tested positive for marijuana use or had trace amounts of the drug in their system. No students tested positive for cocaine use.

It should be noted that the percentage of students testing positive for marijuana use/having trace amounts of the drug in their system is higher than that seen in previous reports. However, this is likely the result of the small number of persons admitted and tested.

All students testing positive for marijuana use/having trace amounts of the drug in their system were males between the ages of 13 and 15 years, with the majority being 14 (See Figures 3 and 4).



Source: Edna Nicholls Centre



The quantitative marijuana test results are presented in Figure 5. From the Chart it can be seen that two out of the five students had trace amounts of the drug within their system (a result of less than 50 ng/ml⁵). The remaining three tested positive and were equally distributed across three categories: 50 - 149 ng/ml, 250-349 ng/ml and 350-449 ng/ml (See Figure 5).

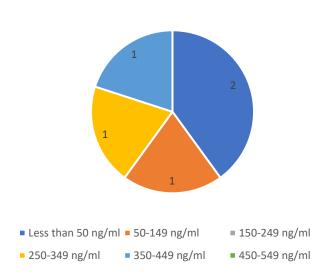


Figure 5: Marijuana Test Results for Students Admitted to the Edna Nicholls Centre in 2021

Source: Edna Nicholls Centre

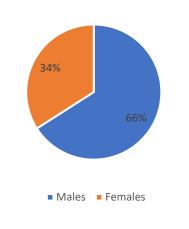
⁵ Ng/ml refers to nanograms per milliliter. This is a clinical indicator of the level of THC found within a sample of urine. THC is the main psychoactive chemical found in marijuana. A reading of 50 ng/ml or over is considered to be a *positive test* result while more than 0 but less 50 ng/ml suggests *trace amounts* of the drug within an individual's system. Test results are indicative of recency and level of use. Higher levels typically correspond with heavy and/or frequent/regular use.

4 Treatment and Rehabilitation

4.1 Psychiatric Hospital

Eight hundred and eighty-four persons were admitted to the Psychiatric Hospital during the period January 1 to December 31, 2021. From Figure 6 it can be seen that males accounted for approximately two-thirds of all admissions.

Figure 6: Gender Distribution of Persons Admitted to the Psychiatric Hospital in 2021



Source: Psychiatric Hospital

Figure 7 shows that persons of all ages were admitted to the Hospital during the target period. The youngest persons were in the '10 and under' age category while the oldest were in the '61 and over' age group. The Chart also reveals that of all the age categories, '61 and over' was the single largest.



Figure 7: Age Distribution of Persons Admitted to the Psychiatric Hospital in 2021

Admissions Related to Drug Use

Drug treatment was sought by approximately one third (35%) of the persons admitted to the Psychiatric Hospital in 2021 (See Figure 8). As in previous years, males accounted for the majority of persons seeking such treatment (See Figure 9). With regards to age, Figure 10 shows that just under two-thirds of persons seeking drug treatment were age 40 and under.

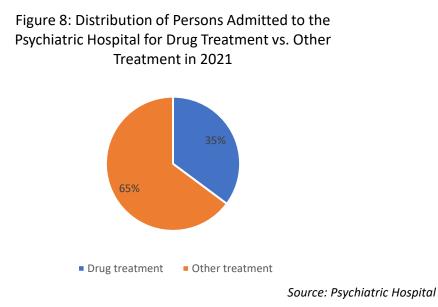


Figure 9: Gender Distribution of Persons Admitted to the Psychiatric Hospital for Drug Treatment in 2021

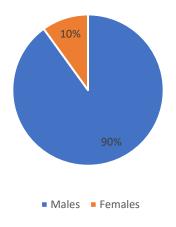




Figure 10: Age Distribution of Persons Admitted to the Psychiatric Hospital for Drug Treatment in 2021

Source: Psychiatric Hospital

Comorbid Diagnoses Including Substance Use Disorders

Approximately one quarter (24%) of all admissions to the Psychiatric Hospital in 2021 involved comorbid diagnoses⁶ including a substance use disorder (See Figure 11). Like the persons seeking drug-treatment, these patients were primarily males and persons under the age of 40 (See Figures 12 and 13).

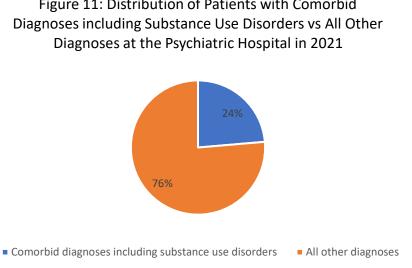
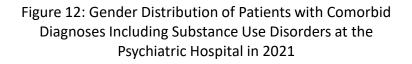
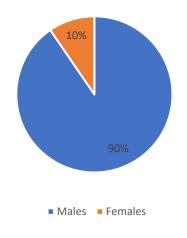


Figure 11: Distribution of Patients with Comorbid

⁶ Comorbid diagnoses refers to the occurrence of 2 or more disorders or illnesses in the same person (National Institute on Drug Abuse, 2018).





Source: Psychiatric Hospital

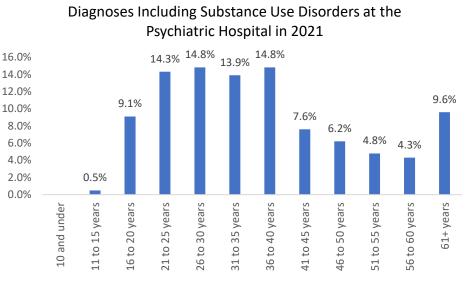


Figure 13: Age Distribution of Patients with Comorbid

Source: Psychiatric Hospital

Drug Rehabilitation Unit

One hundred and eighty-seven persons were assessed by the Psychiatric Hospital's Drug Rehabilitation Unit in 2021. Figure 14 shows that the majority of these individuals (51.9%) were referred for treatment at the Substance Abuse Foundation. Other treatment referrals included the Psychiatric Hospital's Day Programme (18.7%) and the Centre for Counselling Addiction Support Alternatives (0.5%) (See Figure

14). After initial assessment, 28.9% were no longer interested in pursuing treatment/ could not be reached via telephone to initiate counselling sessions⁷ (See Figure 14).

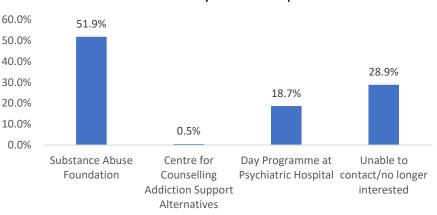


Figure 14: Distribution of Referrals Made by the Drug Rehab Unit at the Psychiatric Hospital in 2021

Source: Psychiatric Hospital

Demographic Profile of Persons Receiving Drug Treatment

Thirty-five persons received drug treatment from the Psychiatric Hospital's Day Programme in 2021. From Figures 15 and 16, it can be seen that males and persons 40 years and under accounted for the majority of the Programme's clients during that year. This is a typical finding and coincides with the gender and age profiles of Day Programme clients in previous years.

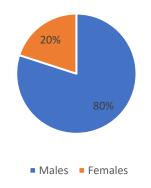


Figure 15: Gender Distribution of Persons Admitted to the Psychiatric Hospital's Day Programme in 2021

⁷ Following the onset of COVID-19, the Drug Rehabilitation Unit ceased in-person counselling and transitioned to telephone counselling in an effort to reduce the number of persons entering the Hospital compound. In order to receive drug counselling, persons must provide a valid telephone number where they can be reached. The Drug Rehabilitation Unit attempts to reach persons three times to initiate counselling sessions following assessment. If they cannot be reached within these three tries, no further attempts are made.

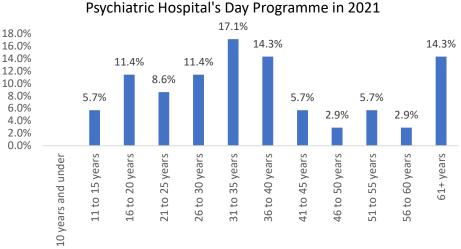
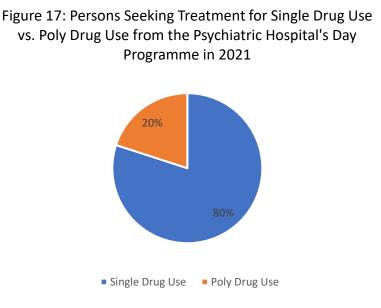


Figure 16: Age Distribution of Persons Admitted to the

Source: Psychiatric Hospital

Drug Use Profile

Approximately eight out of every 10 persons (80%) treated within the Day Programme were treated for single drug use (See Figure 17). The remainder received treatment for poly drug use (See Figure 17).



Source: Psychiatric Hospital

From Figure 18 it can be seen that alcohol, marijuana and crack cocaine were the primary drugs motivating the need for treatment among the Day Programme's clients. Of these, alcohol was the most common, followed by marijuana and crack cocaine respectively.

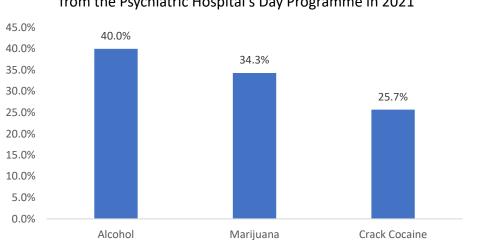


Figure 18: Primary Drugs for which Treatment was Sought from the Psychiatric Hospital's Day Programme in 2021

When gender was considered, Figure 19 shows that both males and females were treated for all three substances. The primary drug distribution for males mirrored that of the wider treatment group (See Figures 18 and 19), with alcohol being their most common substance of choice. For females, however, marijuana was the most common primary drug followed closely by alcohol and crack cocaine (See Figure 19).

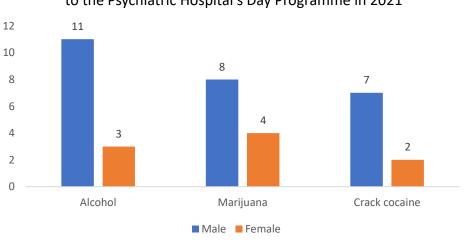
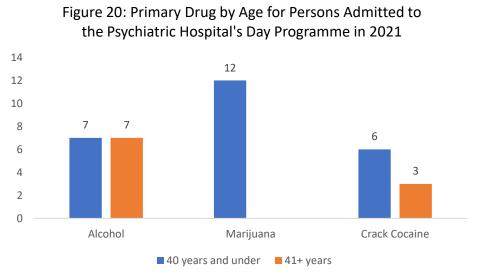


Figure 19: Primary Drug by Gender for Persons Admitted to the Psychiatric Hospital's Day Programme in 2021

With regards to age, Figure 20 shows that marijuana was the most common primary drug among those age 40 and under while alcohol was the most common primary drug for those age 41 and over.

Source: Psychiatric Hospital

Source: Psychiatric Hospital



Source: Psychiatric Hospital

Figure 21 presents the most frequent method of administration for the primary drugs identified. All persons treated for marijuana or crack cocaine use reported smoking these substances while oral consumption was the only identified method of administration for alcohol (See Figure 21).

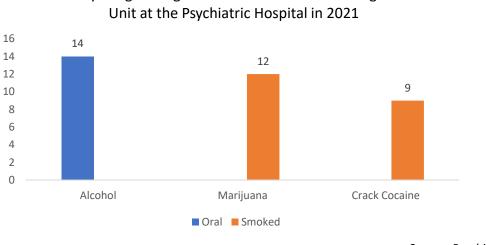


Figure 21: Most Frequent Method of Administration for Primary Drug among Persons Admitted to the Drug Rehab Unit at the Psychiatric Hospital in 2021

Recent Drug Use History

Recent drug use history was assessed by asking persons about their drug use during the 12 months and 30 days leading up to treatment entry. These findings are presented in Figures 22 and 23. The Charts are identical and reveal that clients used alcohol, marijuana, crack cocaine and ecstasy in the month and year preceding treatment. Of these, alcohol and marijuana were most commonly used.

Source: Psychiatric Hospital

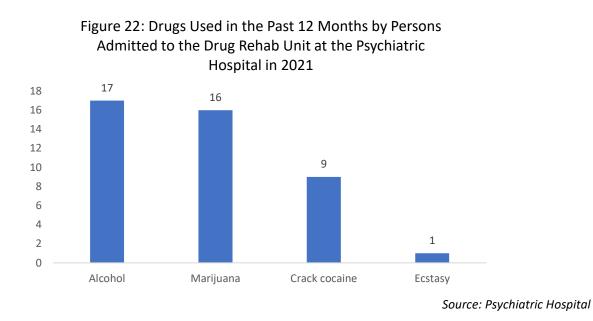
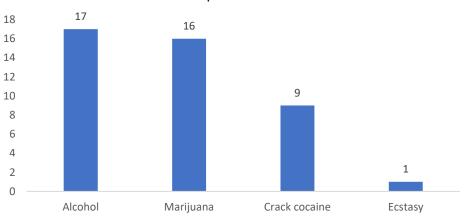


Figure 23: Drugs Used in the Past 30 Days by Persons Admitted to the Drug Rehab Unit at the Psychiatric Hospital in 2021



Source: Psychiatric Hospital

When gender was considered, the results showed that all four substances were used by males during the year and month leading up to treatment (See Figures 24 and 25). However, females only reported use of alcohol, marijuana and crack cocaine during these time periods (See Figures 24 and 25). With regards to age, Figures 26 and 27 show that persons in the 40 and under age group were most likely to report the use of marijuana during the preceding year and month. In contrast, those 41 and over were

most likely to report the use of alcohol. The Charts also reveal that the lone person who reported using ecstasy was in the 40 and under age group.

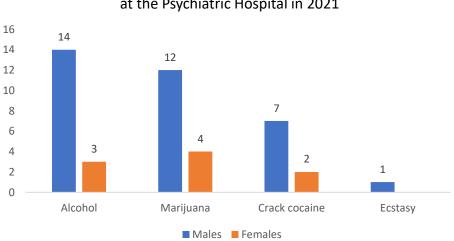
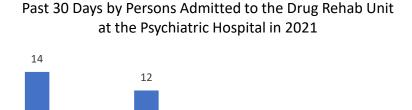


Figure 24: Gender Distribution of Drugs Used in the Past 12 Months by Persons Admitted to the Drug Rehab Unit at the Psychiatric Hospital in 2021

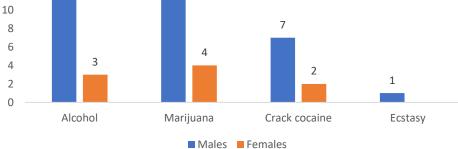


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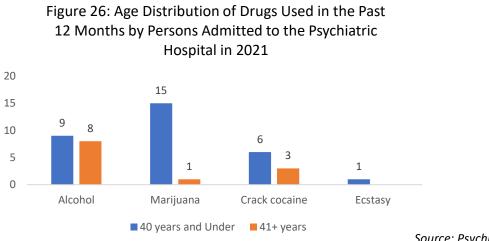
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Figure 25: Gender Distribution of the Drugs Used in the

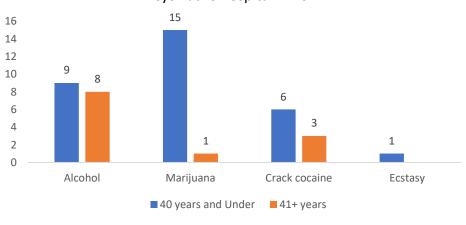


Source: Psychiatric Hospital



Source: Psychiatric Hospital

Figure 27: Age Distribution of Drugs Used in the Past 30 Days by Persons Admitted to the Drug Rehab Unit at the Psychiatric Hospital in 2021

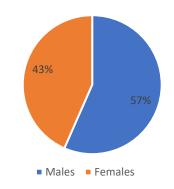


Source: Psychiatric Hospital

Thrive Family Centre

Seventy-six young persons (ages 17 and under) were admitted to the Thrive Family Centre at the Psychiatric Hospital in 2021, where they received early intervention for behavioural problems. Figure 28 shows that males outnumbered females, accounting for 57% of the admissions to the Centre during the year. These findings are consistent with those from previous years.

Figure 28: Gender Distribution of Persons Admitted to the Thrive Family Centre in 2021



Source: Psychiatric Hospital

With regards to age, the majority of persons admitted to the Centre were between 10 and 17 years, with the 14 to 17 age group accounting for half of all admissions (See Figure 29).

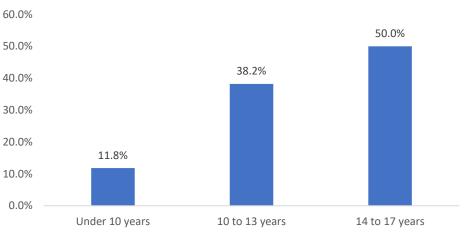
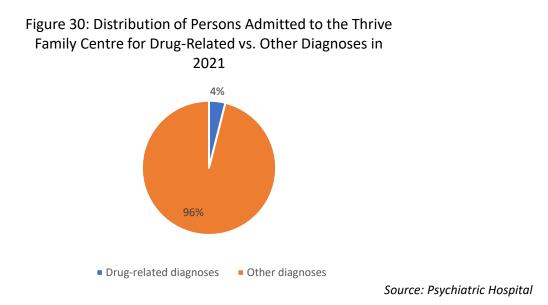
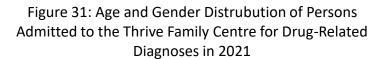


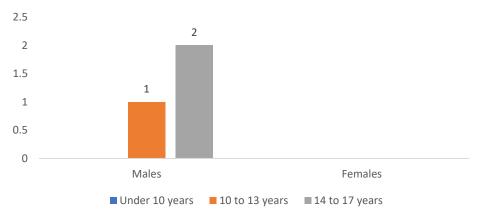
Figure 29: Age Distribution of Persons Admitted to the Thrive Family Centre in 2021

Source: Psychiatric Hospital

Three of the 76 persons (4%) admitted to the Thrive Family Centre were treated for drug-related diagnoses (See Figure 30). All three of these individuals were male (See Figure 31). Two were in the 14 to 17 age group and one was between the ages of 10 and 13 (See Figure 31). In each case, marijuana was the primary drug.







4.2 Substance Abuse Foundation

Eighty-eight persons were admitted to the Substance Abuse Foundation⁸ in 2021, the majority of whom were males and persons 40 years and younger (See Figures 32 and 33).

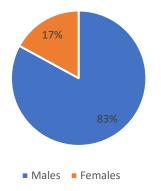


Figure 32: Gender Distribution of Persons Seeking Drug Treatment at the SAF in 2021

Source: Substance Abuse Foundation

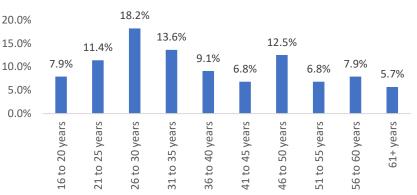


Figure 33: Age Distribution of Persons Seeking Drug Treatment at SAF in 2021

Source: Substance Abuse Foundation

Figures 34 through 38 present additional demographic information on those seeking drug treatment at the SAF during the target period. From the Charts it can be seen that clients were typically single, had no dependents and lived in their family home (See Figures 34, 35 and 36). Additionally, most persons had

⁸ The Substance Abuse Foundation Inc. comprises of 2 treatment facilities: Verdun House and Marina House. Verdun House caters to males 18 years of age and older while Marina House caters to females 18 years and over.

attained a secondary school education and were unemployed and looking for work (See Figures 37 and 38).

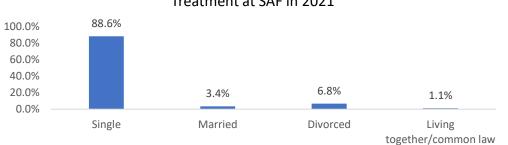
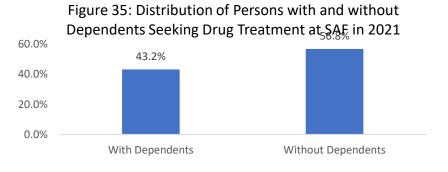
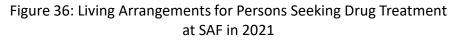


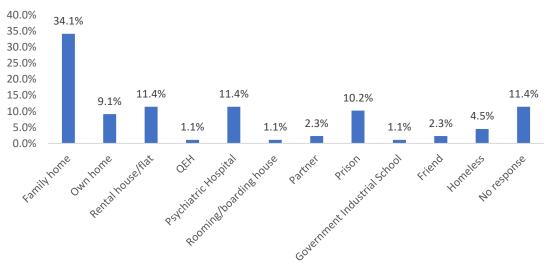
Figure 34: Relationship Status of Persons Seeking Drug Treatment at SAF in 2021

Source: Substance Abuse Foundation



Source: Substance Abuse Foundation





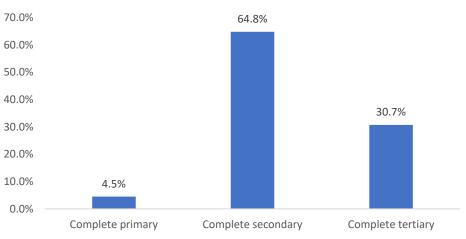


Figure 37: Highest Level of Education Attained by Persons Seeking Drug Treatment at SAF in 2021

Source: Substance Abuse Foundation

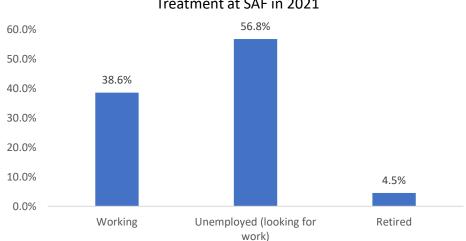
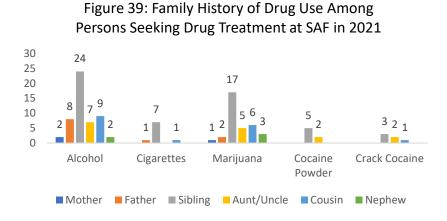


Figure 38: Employment Status of Persons Seeking Drug Treatment at SAF in 2021

Source: Substance Abuse Foundation

Family History of Drug Use

Data regarding family drug use history is presented in Figure 39. The Chart shows that alcohol and marijuana were the substances most commonly used by immediate and extended family members, though some use of tobacco and cocaine (crack and powdered) was also indicated (See Figure 39). It also reveals that there were more reports of drug use by immediate family members (parents, siblings) when compared to extended family (aunts, uncles, cousins, nephews) (See Figure 39).



Source: Substance Abuse Foundation

Clients' Drug Use History

Clients indicated the use of a wide range of substances throughout their lifetime. From Figure 40 it can be seen that marijuana, alcohol and crack cocaine were the three most commonly cited substances. Other popular drugs included: cigarettes, cocaine powder, fanta and ecstasy/MDMA/molly (See Figure 40). There were also a small number of reports relating to the use of lean⁹, methamphetamine/crystal meth, mushrooms, LSD, hashish, blackies, codeine and prescription drugs (e.g. Percocet, benzodiazepines) (See Figure 40).

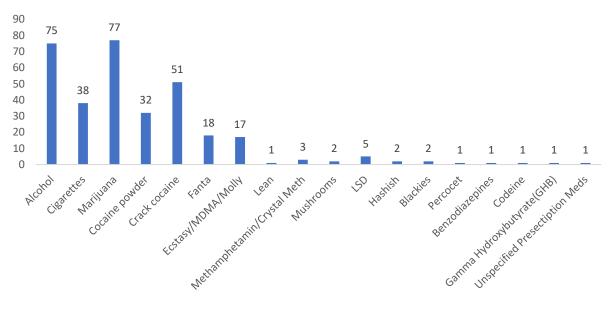
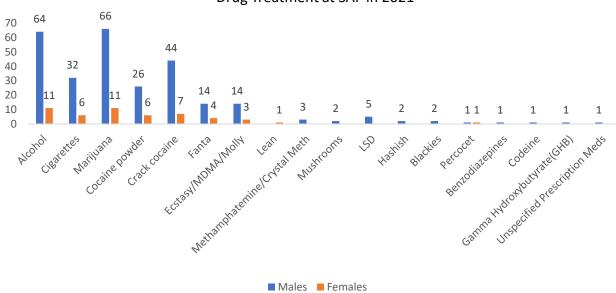
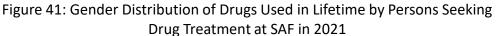


Figure 40: Drugs Used in Lifetime by Persons Seeking Drug Treatment at SAF in 2021

⁹ Lean also known as "Purple Drank" or "Sizzurp" is a mixture of codeine cough syrup, soda and hard candy – typically sprite and Jolly Rancher.

When gender was considered, marijuana, alcohol and crack cocaine remained the three most commonly used substances by both males and females during their lifetime (See Figure 41). Figure 41 also reveals that males were most likely to report the use of non-traditional substances. With respect to age, marijuana, alcohol and crack cocaine were also the three most commonly used substances for those 40 and under and those 41 and over (See Figure 42). The use of non-traditional substances was reported by persons in both age groups but was more likely among those 40 years and under (See Figure 42).





Source: Substance Abuse Foundation

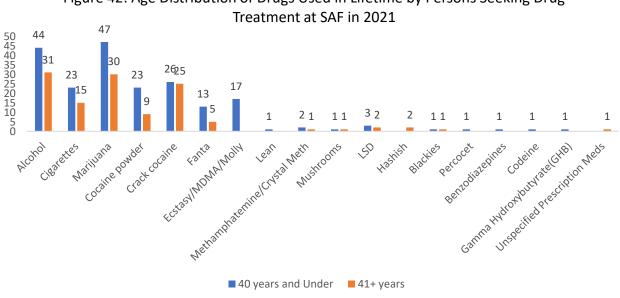
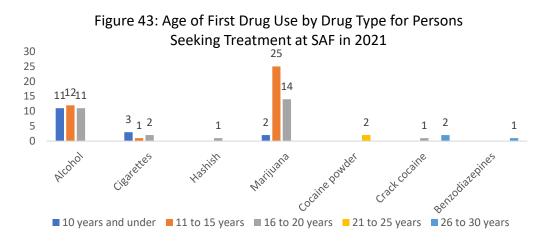


Figure 42: Age Distribution of Drugs Used in Lifetime by Persons Seeking Drug

Figure 43 presents data related to clients' first drug use. From the Chart it can be seen that marijuana and alcohol were the most common drugs of first use, and together were cited by 85.2% of clients. For both substances, first use took place by age 20 but in most cases had occurred by age 15 (See Figure 43). Where substances such as cocaine powder, crack cocaine and benzodiazepines were identified as the first substance ever used, the corresponding age of first use was typically older – specifically over the age of 20 and in many cases of over the age of 25 (See Figure 43).



Source: Substance Abuse Foundation

Treatment Referral

'Self-referral' was the single most common referral source for SAF clients in 2021, distantly followed by the court, the psychiatric hospital, encouragement from family and friends and the prison/juvenile detention centre (See Figure 44). There were also a small number of referrals from employers and one individual was referred for treatment from a private organization – namely Counselling Solutions (See Figure 44).

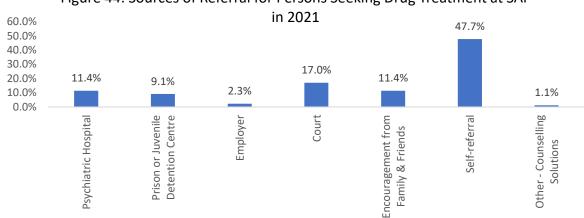
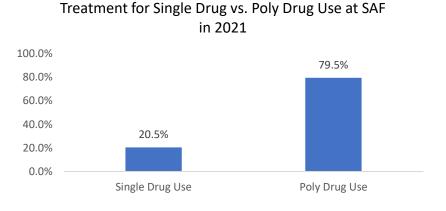


Figure 44: Sources of Referral for Persons Seeking Drug Treatment at SAF

Drug Treatment Profile

The majority (79.5%) of clients seeking drug treatment at the SAF in 2021 were treated for poly drug use (See Figure 45). Only two out of every 10 persons (20.5%) were treated for single drug use (See Figure 45).

Figure 45: Distribution of Persons Seeking



Source: Substance Abuse Foundation

All clients, including those treated for poly drug use, had a primary drug which motivated their need for treatment. Figure 46 shows that crack cocaine, marijuana and alcohol were the most common primary drugs for which treatment was sought at the SAF in 2021. Notably fewer persons sought treatment for cocaine powder and benzodiazepines (See Figure 46).

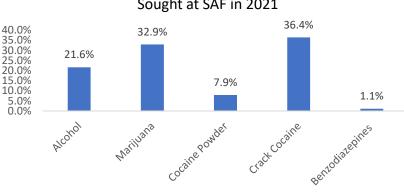
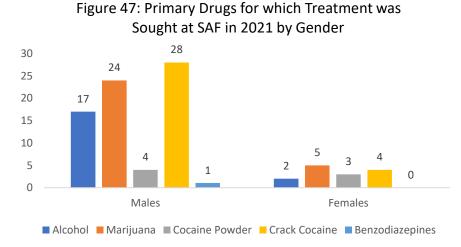


Figure 46: Primary Drugs for which Treatment was Sought at SAF in 2021

When gender was considered, crack cocaine, marijuana and alcohol remained the most common primary drugs for which males sought treatment (See Figure 47). For females, marijuana, crack cocaine and cocaine powder were most problematic. The lone person seeking treatment for benzodiazepines was male (See Figure 47).

Source: Substance Abuse Foundation



Source: Substance Abuse Foundation

With regards to age, Figure 48 shows that marijuana was the leading primary drug for which persons in the 40 and under age category sought treatment while crack cocaine was the leading primary drug for those 41 and over. Persons in the 40 and under age group were also more likely to seek treatment for cocaine powder than their older counterparts (See Figure 48). Likewise, the lone client seeking treatment for benzodiazepines was also in the 40 and under age category (See Figure 48).

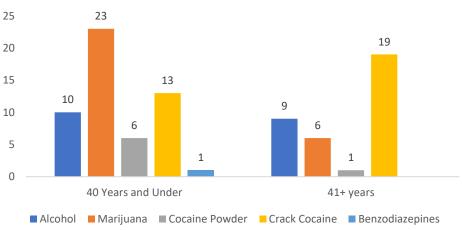
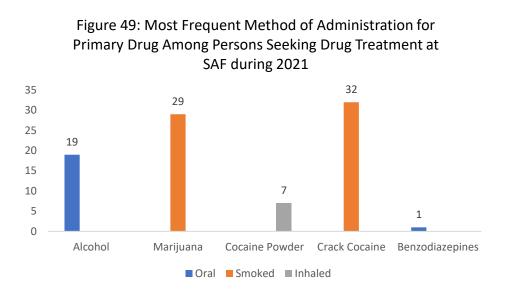


Figure 48: Primary Drugs for which Treatment was sought at SAF in 2021 by Age

Figure 49 presents the most frequent method of administration for clients' primary drugs. From the Chart it can be seen that all persons who sought treatment for marijuana and crack cocaine reported smoking these substances. Benzodiazepines and alcohol were consumed orally and cocaine powder was inhaled (See Figure 49).

Source: Substance Abuse Foundation



Source: Substance Abuse Foundation

Most Recent Treatment Prior to Admission

Of the 88 persons admitted to the SAF in 2021, 50 (56.8%) reported no previous drug treatment. All 38 (43.2%) who had received prior treatment, received residential treatment (See Figure 50).

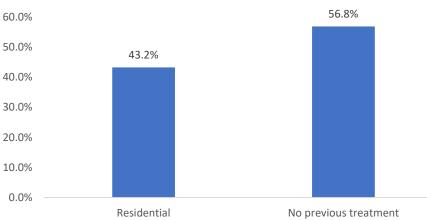
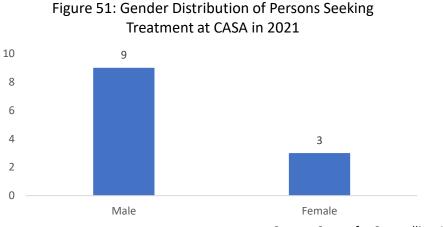


Figure 50: Most Recent Type of Drug Treatment Prior to Admission at the SAF in 2021

Source: Substance Abuse Foundation

4.3 Centre for Counselling Addiction Support Alternatives

Twelve persons sought substance abuse treatment at CASA during 2021, the majority of whom were males, 30 years of age and under (See Figures 51 and 52).



Source: Centre for Counselling Addiction Support Alternatives

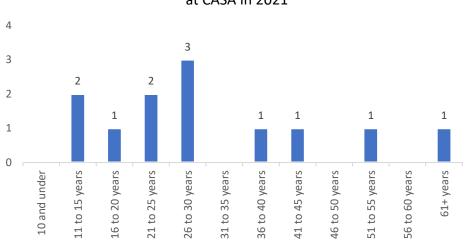


Figure 52: Age Distribution of Persons Seeking Treatment at CASA in 2021

Figures 53 through 55 show that, during 2021, CASA's clients were most likely to be single individuals with no dependents who lived in their family homes. With regards to education and employment, the majority of clients had either a primary or secondary school education and were employed (See Figures 56 and 57).

Source: Centre for Counselling Addiction Support Alternatives

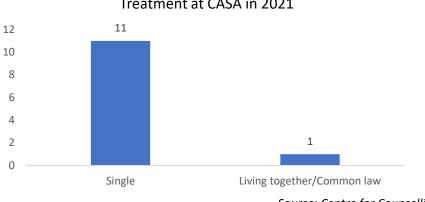
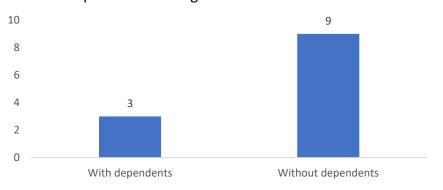


Figure 53: Relationship Status of Persons Seeking Treatment at CASA in 2021

Figure 54: Distribution of Persons with and without Dependents Seeking Treatment at CASA in 2021



Source: Centre for Counselling Addiction Support Alternatives

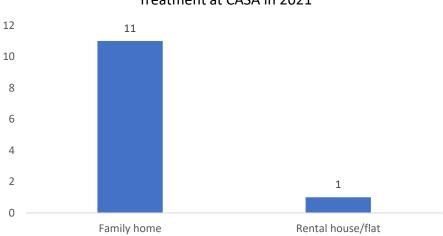


Figure 55: Living Arrangements of Persons Seeking Treatment at CASA in 2021

Source: Centre for Counselling Addiction Support Alternatives

Source: Centre for Counselling Addiction Support Alternatives

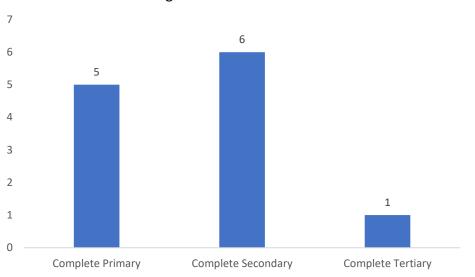


Figure 56: Highest Level of Education Attained by Persons Seeking Treatment at CASA in 2021

Source: Centre for Counselling Addiction Support Alternatives

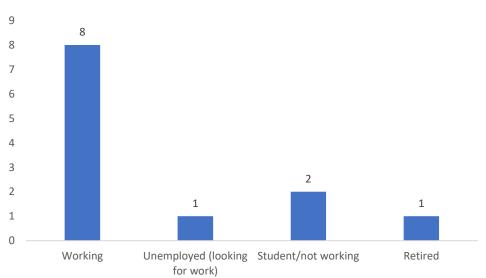


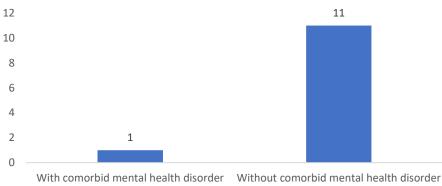
Figure 57: Employment Status of Persons Seeking Treatment at CASA in 2021

Source: Centre for Counselling Addiction Support Alternatives

Psychiatric History

Of the 12 persons seeking treatment at CASA in 2021, only one reported having a comorbid mental health disorder (See Figure 58).

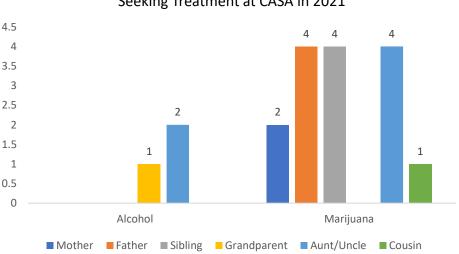
Figure 58: Distribution of Persons with and without Comorbid Mental Health Disorders Seeking Treatment at CASA in 2021

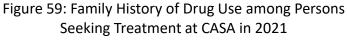


Source: Centre for Counselling Addiction Support Alternatives

Family History of Drug Use

Data regarding the clients' family history of drug use is presented in Figure 59. From the Chart it can be seen that clients reported the use of two substances only by family members. They reported the use of marijuana by parents, siblings, aunts/uncles, and cousins; and alcohol by aunts/uncles and grandparents (See Figure 59). Overall, there were more reports of drug use by first-degree relatives (parents, siblings) than by extended family members.

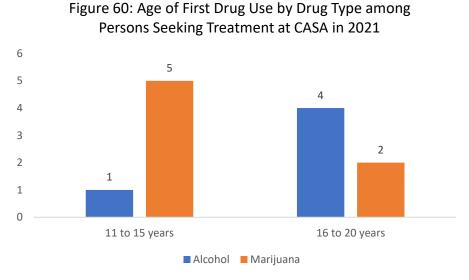




Source: Centre for Counselling Addiction Support Alternatives

Client History of Drug Use

Marijuana and alcohol were the first drugs ever used by clients seeking treatment at CASA in 2021 (See Figure 60). From Figure 60, it can be seen that half of the clients initiated drug use between the ages of 11 and 15 years while the remainder did so between 16 and 20 years. The Chart also shows that, for marijuana, the age of first use was typically younger (11 to 15 years) when compared to alcohol.



Source: Centre for Counselling Addiction Support Alternatives

With regards to lifetime drug use, clients reported the use of only two substances: marijuana and alcohol, both of which were reported with near equal frequency (See Figure 61).

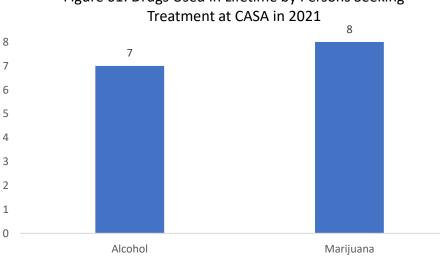
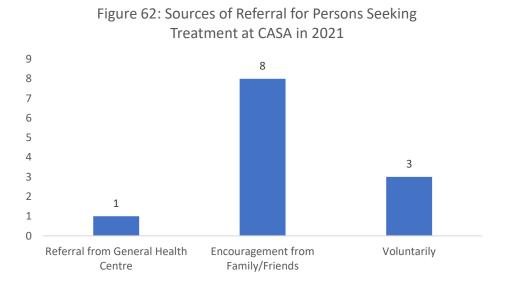


Figure 61: Drugs Used in Lifetime by Persons Seeking

Source: Centre for Counselling Addiction Support Alternatives

Treatment Referral

Figure 62 reveals that 'encouragement from family/friends' was the main reason persons sought treatment at CASA in 2021. Few persons sought treatment on their own accord (voluntarily/self-referral), while one person was referred from a general health centre (See Figure 62).



Source: Centre for Counselling Addiction Support Alternatives

Drug Treatment Profile

The majority (75%) of persons seeking substance abuse treatment at CASA in 2021 were treated for single drug use (See Figure 63). One quarter (3/12) were treated for poly drug use (See Figure 63).

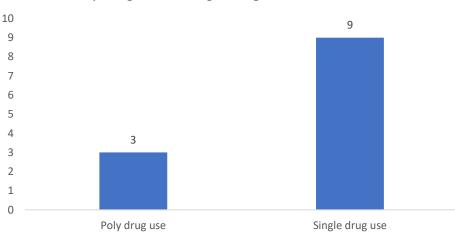


Figure 63: Distribution of Persons Seeking Treatment for Poly Drug Use vs. Single Drug Use at CASA in 2021

Source: Centre for Counselling Addiction Support Alternatives

Alcohol and marijuana were the only two primary drugs for which treatment was sought at CASA, with marijuana being the most common (See Figure 64).

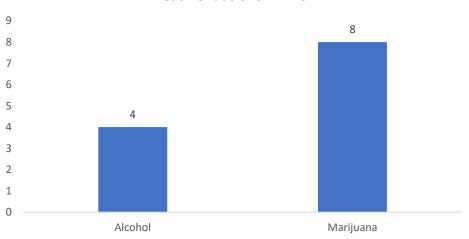
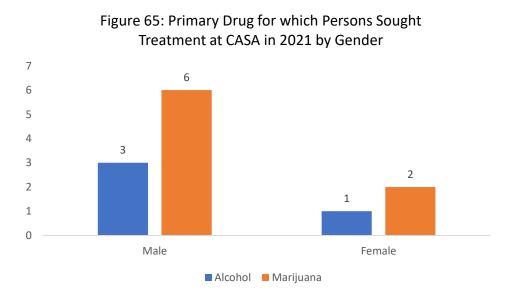


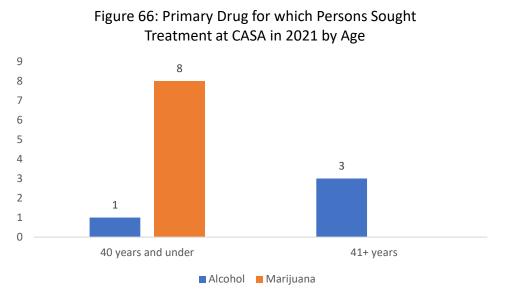
Figure 64: Primary Drug for which Persons Sought Treatment at CASA in 2021

Source: Centre for Counselling Addiction Support Alternatives

Figure 65 shows that marijuana was main primary drug among males and females. In fact, two thirds of both males (6/9) and females (2/3) sought treatment for marijuana use. With regards to age, all persons seeking treatment for marijuana use were in the 40 and under age category (See Figure 66). In contrast, alcohol was the only primary drug for which persons 41 and over sought treatment (See Figure 66).

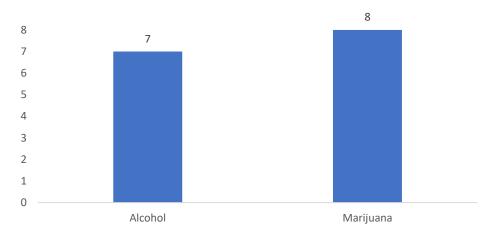


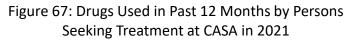
Source: Centre for Counselling Addiction Support Alternatives



Source: Centre for Counselling Addiction Support Alternatives

Figures 67 and 68 present the drugs used by CASA's clients in the 12 months and 30 days preceding treatment entry. Both charts are identical and show that marijuana and alcohol were the only substances used during the specified time periods. They also show that marijuana use was most common.





Source: Centre for Counselling Addiction Support Alternatives

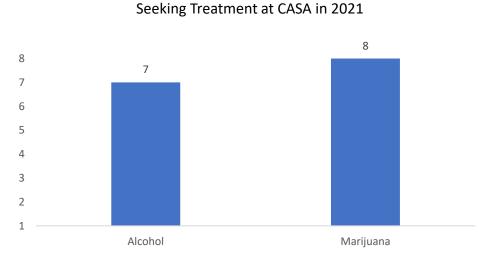


Figure 68: Drugs Used in the Past 30 days by Persons

Source: Centre for Counselling Addiction Support Alternatives

Figures 69 and 70 show that, when gender was taken into consideration, males were equally likely to report marijuana and/or alcohol use in the preceding year and the preceding month. Women were more likely to report marijuana use during the same time periods (See Figures 69 and 70).

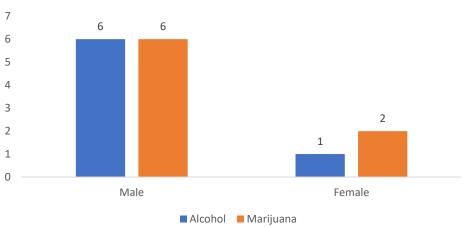
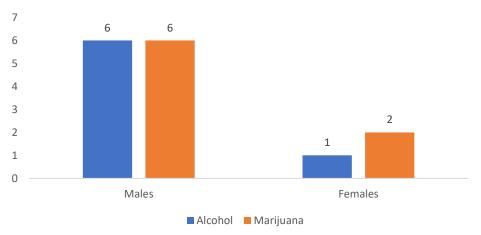


Figure 69: Gender Distribution of Drugs Used in the Past 12 Months by Persons Seeking Treatment at CASA in 2021

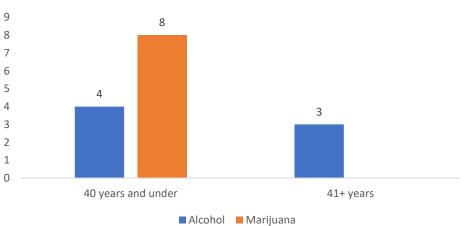
Source: Centre for Counselling Addiction Support Alternatives

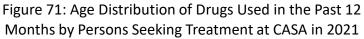
Figure 70: Gender Distribution of Drugs Used in the Past 30 Days by Persons Seeking Treatment at CASA in 2021



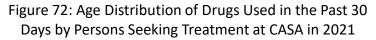
Source: Centre for Counselling Addiction Support Alternatives

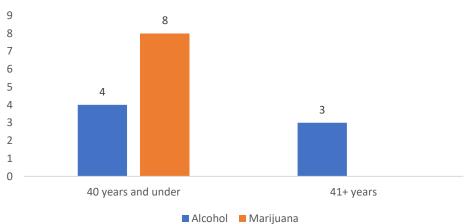
With regards to age, Figures 71 and 72 reveal that both alcohol and marijuana were reportedly used by persons 40 and under during the year and month leading up to their treatment entry. However, only alcohol use was reported by persons 41 and over during the same time periods (See Figures 71 and 72).





Source: Centre for Counselling Addiction Support Alternatives





Source: Centre for Counselling Addiction Support Alternatives

All persons seeking treatment for marijuana use reported 'smoking' to be their main method of administration (See Figure 73). Similarly, 'oral' consumption was the only method of administration identified among all persons seeking treatment for alcohol use (See Figure 73).

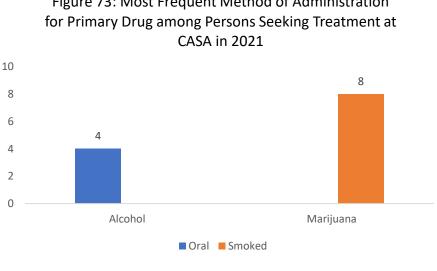


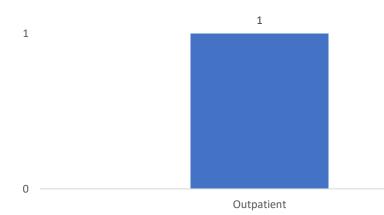
Figure 73: Most Frequent Method of Administration

Most Recent Treatment

Only one of the 12 persons seeking substance abuse treatment at CASA received prior treatment. Figure 74 shows that they most recently received outpatient treatment.

Source: Centre for Counselling Addiction Support Alternatives

Figure 74: Most Recent Type of Drug Treatment Prior to Enrollement among Persons Seeking Treatment at CASA in 2021



Source: Centre for Counselling Addiction Support Alternatives

4.4 National Council on Substance Abuse

Thirty-five persons received counselling at the NCSA in 2021, the majority of whom (71%) were treated for substance use issues (See Figure 75).

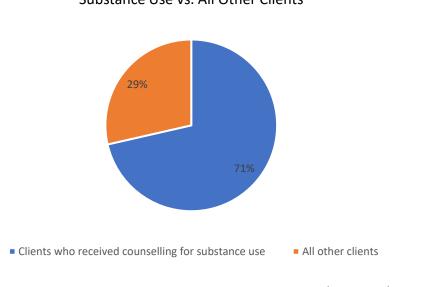


Figure 75: Distribution of Clients Seeking Treatment for Substance Use vs. All Other Clients

Source: The National Council on Substance Abuse

Figures 76 and 77 show that, during the target period, most of the NCSA's counselling clients were males and persons 20 years and under.

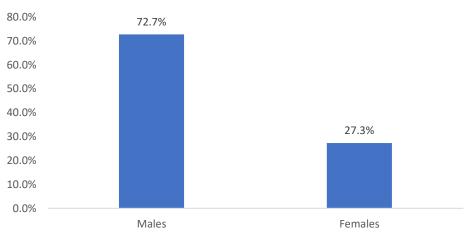


Figure 76: Gender Distribution of All Clients Counselled at the NCSA in 2021

Source: The National Council on Substance Abuse

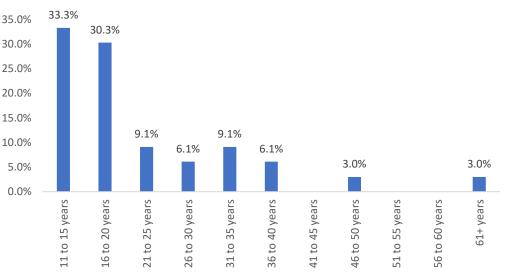


Figure 77: Age Distribution of All Clients Seeking Counselling at the NCSA in 2021

Source: The National Council on Substance Abuse

Demographic Profile of Drug Treatment Clients

As with the wider client group, those seeking drug treatment at the NCSA in 2021 were primarily males and persons 20 years and under (See Figures 78 and 79). Figures 80 through 82 also show that most persons were single, had no dependents and lived in their family home. Additionally, "complete primary" was the highest level of education attained by approximately two-thirds (68%) of the clients at the time of intake (See Figure 83). This coincides with the fact that the majority (64%) were students – many of whom were still enrolled in secondary school (See Figure 84).

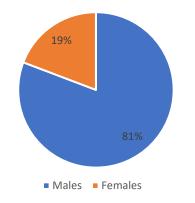


Figure 78: Gender Distribution of Clients Seeking Drug Treatment at NCSA in 2021

Source: The National Council on Substance Abuse

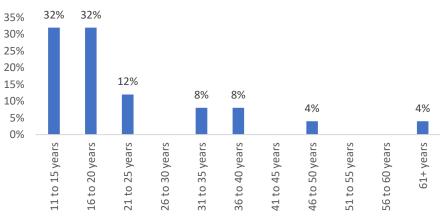


Figure 79: Age Distribution of Clients Seeking Drug Treatment at NCSA in 2021

Source: The National Council on Substance Abuse

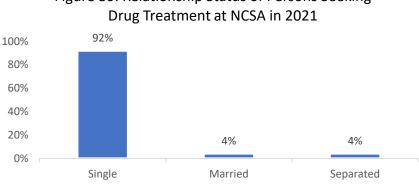


Figure 80: Relationship Status of Persons Seeking

Source: The National Council on Substance Abuse

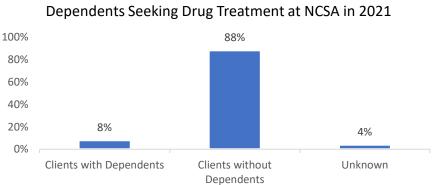


Figure 81: Distribution of Persons With vs Without

Source: The National Council on Substance Abuse

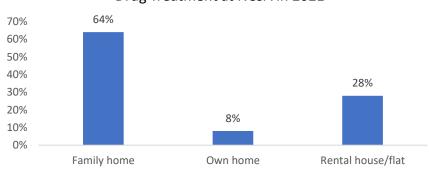
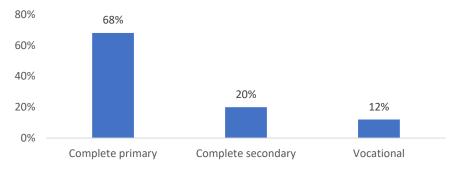


Figure 82: Living Arrangements of Persons Seeking Drug Treatment at NCSA in 2021

Source: The National Council on Substance Abuse

Figure 83: Highest Level of Education Attained by Persons Seeking Drug Treatment at the NCSA in 2021



Source: The National Council on Substance Abuse

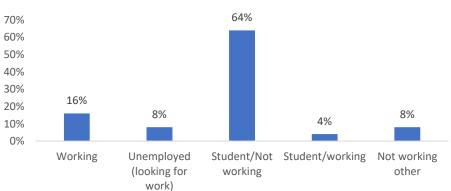


Figure 84: Employment Status of Persons Seeking Drug Treatment at the NCSA in 2021

Source: The National Council on Substance Abuse

Family History of Drug Use

Figure 85 reveals the use of alcohol, tobacco, marijuana, cocaine powder and blackies by clients' relatives. Of these, marijuana use was most common followed by alcohol use. The Chart also suggests that drug use was more common among extended family members (aunts/uncles, cousins).

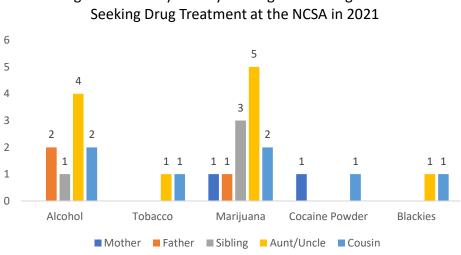


Figure 85: Family History of Drug Use Among Persons

Clients' Drug Use History

Figure 86 presents data regarding lifetime drug use for persons seeking drug treatment at the NCSA in 2021. From the Chart, it can be seen that marijuana, alcohol and fanta were the three most commonly used substances, followed by tobacco, cocaine powder and ecstasy.

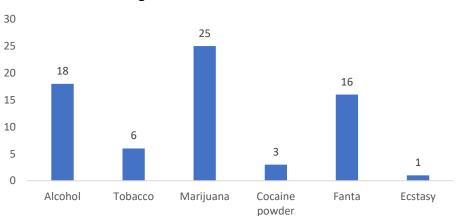


Figure 86: Drugs Used in Lifetime by Persons Seeking Drug Treatment at the NCSA in 2021

Source: The National Council on Substance Abuse

Source: The National Council on Substance Abuse

When gender was considered, marijuana, alcohol and fanta remained the three most commonly used substances for both males and females (See Figure 87). Likewise, they were also the three most commonly used substances for those 20 years and under (See Figure 88). Persons in the 21 to 40 age category reported the use of more substances than any other age group, and these included: marijuana, alcohol, tobacco, fanta, cocaine powder and ecstasy respectively (See Figure 88). Only three substances were reportedly used by those 41 and over, and these were marijuana, alcohol and tobacco (See Figure 88). Of particular note is that fact that cocaine powder and ecstasy were only used by persons between 21 and 40 years (See Figure 88).

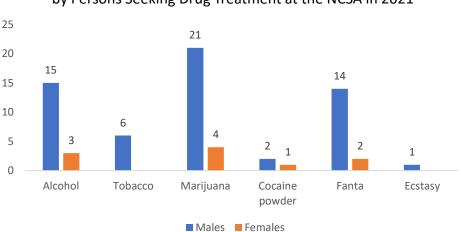


Figure 87: Gender Distribution of Drugs Used in Lifetime by Persons Seeking Drug Treatment at the NCSA in 2021

Source: The National Council on Substance Abuse

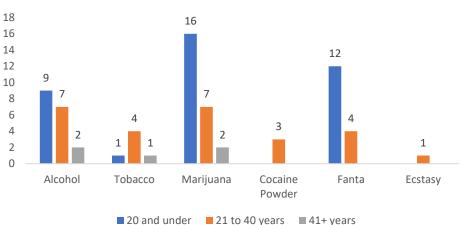
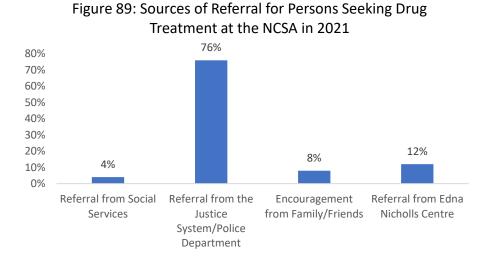


Figure 88: Age Distribution of Drugs Used in Lifetime Among Persons Seeking Drug Treatment at NCSA in 2021

Source: The National Council on Substance Abuse

Treatment Referral

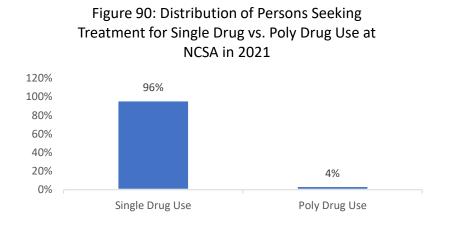
Figure 89 presents the sources of referral for persons seeking drug treatment at the NCSA in 2021. From the Chart, it can be seen that approximately three quarters (76%) of such clients were referred by the Justice System/Police Department. Notably fewer persons were referred by the Edna Nicholls Centre and Social Services. Likewise, few persons sought treatment due to encouragement from family and friends.



Source: The National Council on Substance Abuse

Drug Treatment Profile

Figure 90 shows that during 2021, almost all of the clients (approximately 9 out of every 10) receiving drug treatment at the NCSA were treated for single drug use, and in most cases the primary drug was marijuana (See Figure 91). Alcohol was the only other substance for which treatment was sought at the NCSA during the target period (See Figure 91).



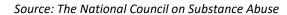
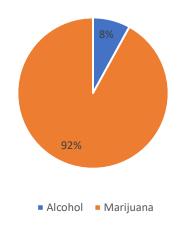


Figure 91: Primary Drugs for which Drug Treatment was Sought at the NCSA in 2021



Source: The National Council on Substance Abuse

Given the high proportion of persons who sought treatment for marijuana use, it is not surprising that marijuana was also the most common primary drug for both males and females, as well as for persons 40 years and under (See Figures 92 and 93). Alcohol and marijuana were equally problematic for those in the 41 and over age category, as one such client sought treatment for alcohol use while the other sought treatment for marijuana use (See Figure 93).

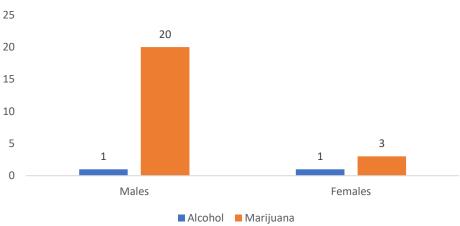


Figure 92: Primary Drugs for which Drug Treatment was sought at the NCSA in 2021 by Gender

Source: The National Council on Substance Abuse

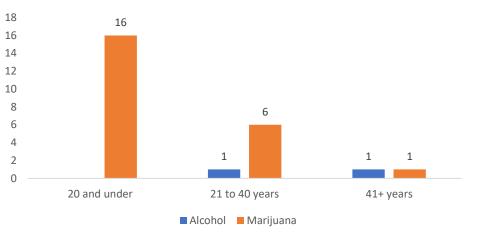


Figure 93: Primary Drugs for which Drug Treatment was Sought at the NCSA in 2021 by Age

Source: The National Council on Substance Abuse

Figure 94 shows that all persons whose primary drug was marijuana reported smoking the substance. Alternately, oral consumption was the only method of administration cited for alcohol (See Figure 94).

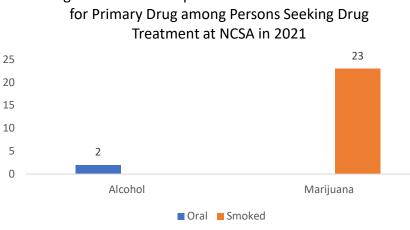
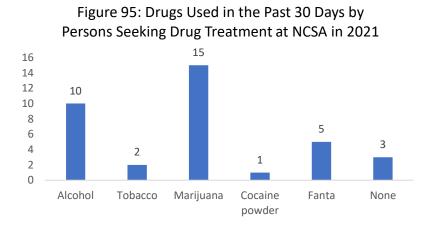


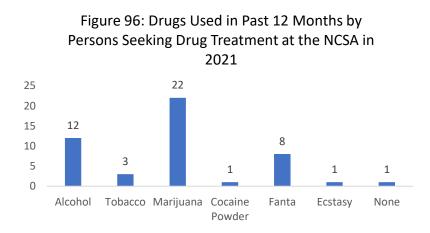
Figure 94: Most Frequent Method of Adminstration

Source: The National Council on Substance Abuse

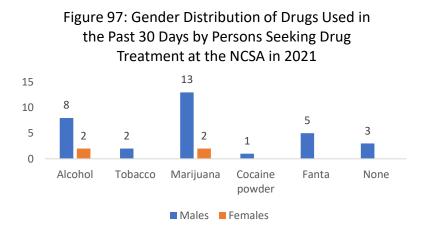
The data regarding past year and past month drug use among NCSA's drug treatment clients was a reflection of the lifetime drug use data presented earlier in this report. As such, marijuana, alcohol and fanta were the top three substances used by clients during the 12 months and 30 days leading up to treatment entry (See Figures 95 and 96). Likewise, they remained the top three substances used by both males and females during these time periods (See Figures 97 and 98).



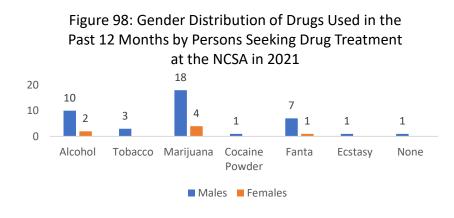
Source: The National Council on Substance Abuse



Source: The National Council on Substance Abuse

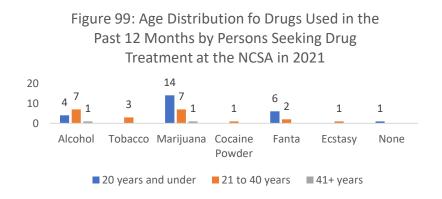


Source: The National Council on Substance Abuse

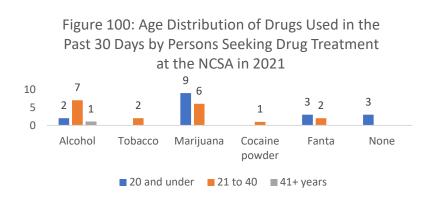


Source: The National Council on Substance Abuse

When age was considered, marijuana, fanta and alcohol were also the substances most commonly used by persons aged 40 and under during the 30 days and 12 months preceding treatment entry (See Figures 99 and 100). For those in the 41 and over age category, there were two reports of drug use during the 12-month lead-up (one for alcohol use and one for marijuana use) and only one report for the 30-day lead-up – this involved alcohol use (See Figures 99 and 100).



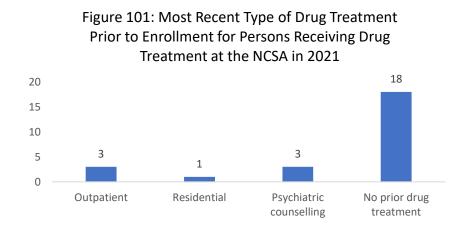
Source: The National Council on Substance Abuse



Source: The National Council on Substance Abuse

Most Recent Treatment Prior to Admission

Of the 25 persons who received drug treatment at the NCSA in 2021, seven reported prior drug treatment (See Figure 101). For these clients, outpatient treatment and psychiatric counselling were most common (See Figure 101). Only one individual reported receiving residential treatment prior to enrollment at the NCSA (See Figure 101).

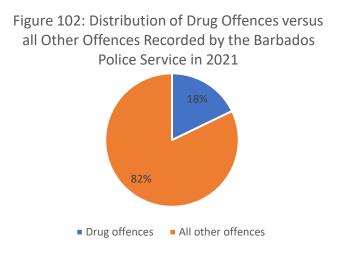


Source: The National Council on Substance Abuse

5 Supply Control

5.1 Barbados Police Service

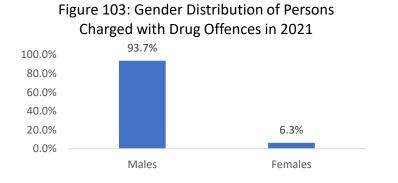
The Barbados Police Service (TBPS) recorded 5392 offences between January 1 and December 31, 2021, and 18% of these were drug-related (See Figure 102).



Source: Barbados Police Service

Demographic Profile of Drug Offenders

Three hundred and seventy-nine persons were charged with drug offences during period. Figures 103 and 104 show that the majority of drug offenders were males and persons under the age of 40. Figure 104 also shows that the percentage of drug offenders increased steadily up to the age of 34 and declined thereafter. With regards to nationality, approximately nine out of every 10 persons charged with drug offences during 2021 were Barbadian (See Figure 105). Nevertheless, a number of persons from CARICOM and international countries were also among those charged with such offences (See Figure 105).



Source: Barbados Police Service

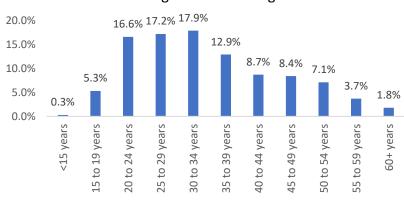


Figure 104: Age Distribution of Persons Charged with Drug Offences during 2021

Source: Barbados Police Service

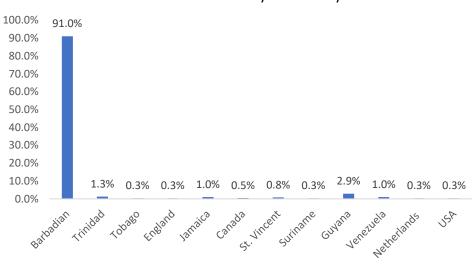
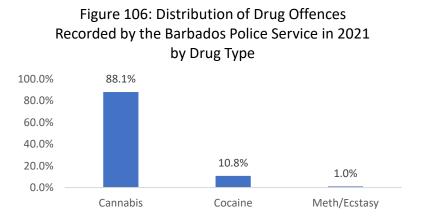


Figure 105: Distribution of Persons Charged with Drug Offences in 2021 by Nationality

Source: Barbados Police Service

Drug Offences by Drug Type

Figure 106 presents drug offences by drug type for the year 2021. From the Chart it can be seen that cannabis offences far outnumbered all other drug offences, including cocaine- and methamphetamine/ecstasy-related offences.



Source: Barbados Police Service

Cannabis Offences

Figure 107 presents the distribution of cannabis offences recorded during 2021 and shows that, as in previous years, "Possession", "Trafficking" and "Offering to Supply" were the top three cannabis offences. Together they accounted for 88.1% of all offences on record for the target period. When compared to cocaine and methamphetamine/ecstasy-related offences, the types of cannabis offences were far more numerous (See Figures 107, 108 and 109).

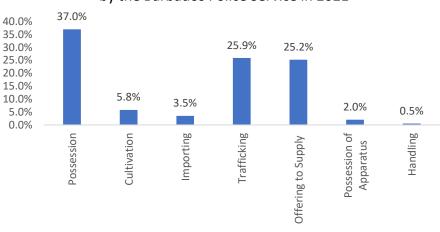


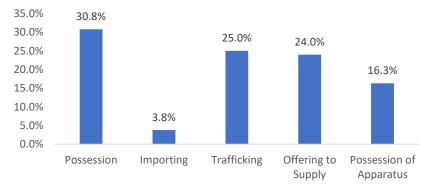
Figure 107: Distribution of Cannabis Offences Recorded by the Barbados Police Service in 2021

Cocaine Offences

The distribution of cocaine offences is presented in Figure 108. From the Chart it can be seen that, like cannabis, "Possession", "Trafficking" and "Offering to Supply" were also the top three offences on record for this substance.

Source: Barbados Police Service

Figure 108: Distribution of Cocaine Offences Recorded by the Barbados Police Service in 2021



Source: Barbados Police Service

Methamphetamine/Ecstasy Offences

Figure 109 presents the distribution of methamphetamine/ecstasy offences recorded during 2021. The Chart shows that "Possession" was the most common offence, far outnumbering "Offering to Supply", "Trafficking" and "Importing".

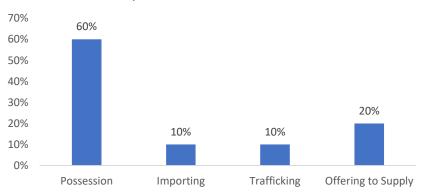


Figure 109: Distribution of Meth/Ecstasy Offences Recorded by the Barbados Police Service in 2021

Source: Barbados Police Service

Drug Seizures

Table 3 shows that cannabis was the primary substance seized by TBPS in 2021 and it was seized in multiple forms, including: compressed, plant and loose. There was also a single seizure involving seeds. In addition to the cannabis seizures, Table 3 also highlights seizures of cocaine and ecstasy, though these were much fewer in number.

Drug/Substance	Number of Seizures	Quantity
Compressed cannabis	278	5372.298 kg
Cannabis plants	167	46,343 plants
Loose cannabis	155	541.307 kg
Cocaine	26	678.863 kg
Ecstasy	3	1033 pills
Other (Loose)	18	Unknown
Other (Seeds)	1	2

Table 3: Drug Seizures Recoded by the Barbados Police Service during 2021

Source: Barbados Police Service

The recorded seizures took place in a variety of locations, the most common of which included: courier services, dwelling houses, bushy areas, streets and the airport (See Figure 110).

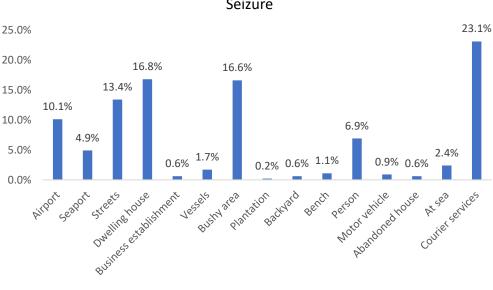


Figure 110: Distribution of 2021 Drug Seizures by Location of Seizure

Source: Barbados Police Service

With regards to the seizure of marijuana plants in particular, Figure 111 reveals that while there were such seizures in each parish, just under two thirds (64%) took place in St. John (40.9%) and St. Joseph (23.1%).

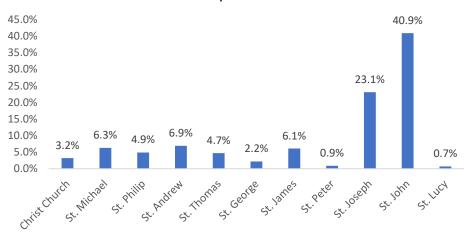


Figure 111: Distribution of 2021 Cannabis Plant Seizures by Parish

Street Values of Drugs

Intelligence reports are used to estimate the street value of various drugs in Barbados. The available information suggested that, during 2021, the value of cannabis ranged from \$4000.00 to \$8000.00 per kg and \$5.00 to \$10.00 per gram, depending on point of origin (See Table 4). The value of cocaine was estimated to be \$50,000.00 per kg/\$50.00 per gram while the value of ecstasy was \$20.00 per pill (See Table 4). These values are equivalent to those recorded in previous years.

Table 4: Drug Prices Recorded by the Barbados Police Service for the Period January 1 to December 31,2021

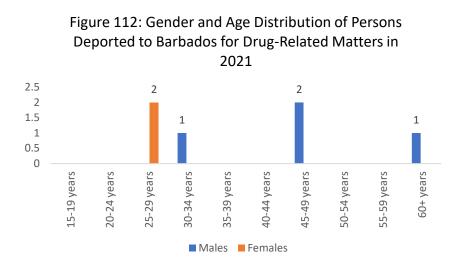
Substance	Estimated Street Value \$
Cannabis	\$4000.00 per kg/\$5.00 per gram (cannabis from St. Vincent)
	\$8000.00 per kg/\$10.00 per gram (cannabis from Canada, Jamaica, USA)
Cocaine	\$50,000.00 per kg/\$50.00 per gram
Ecstasy	\$20.00 per pill

Source: Barbados Police Service

Deportation Statistics

Of the 21 deportees returned to Barbados in 2021, six individuals were deported in connection with drug-related offences. Figure 112 shows that these deportees included both males and females, though they were predominantly male. With respect to age, it can be seen from the Chart that the majority were under 50 (See Figure 112).

Source: Barbados Police Service



Source: Barbados Police Service

All six of the drug-related deportees were returned to Barbados from extra-regional countries, namely: the United Kingdom, Canada and the United States of America (See Figure 113).

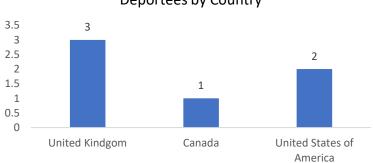


Figure 113: Distribution of 2021 Drug-Related Deportees by Country

Source: Barbados Police Service

Firearm and Ammunition Seizures

Table 5 presents the firearm and ammunition seizures for the year 2021. The data shows that seizures of cartridges and projectiles were the most numerous.

Table 5: Firearm and Ammunition Seizures Recorded by the Barbados Police Service during 2021

Item Seized	Quantity Seized
Firearms	38
Cartridges	482
Projectiles	122
BB Gun	1

Source: Barbados Police Service

Money Laundering Offences

One money laundering offence was recorded during 2021 and this was not drug-related.

5.2 Criminal Justice Research & Planning Unit

Data compiled by the Criminal Justice Research and Planning Unit revealed that, during 2021, a total of 333 persons were sentenced for various drug offences in the Magistrates' Courts of Barbados. The distribution of these persons by drug type is presented in Figure 114. The Chart shows that most persons were tried and sentenced for cannabis-related offences.

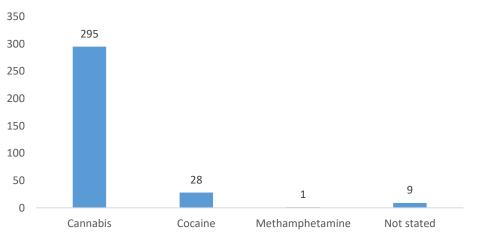


Figure 114: Distribution of Persons Sentenced in the Magistrates' Courts in 2021 by Drug Type

Source: Criminal Justice Research & Planning Unit

Offence Outcomes

Cannabis

Table 6 presents the sentence outcomes for cannabis offences imposed by the Magistrates' Courts in 2021. The data reveals that "Intent to Supply", "Trafficking", and "Possession" were the top 3 cannabis offences tried during the year (See Table 6). The most common sentence outcomes for "Intent to Supply" were "Reprimand and Discharge" (R&D), "Convict, Reprimand and Discharge" (CRD) and "Community Service", while "R&D", "CRD" and "Fine" were the most common - though with varying frequency – for "Trafficking" and "Possession".

Table 6 also shows that, overall, "R&D", "CRD" and "Fine" were the most common sentence outcomes for cannabis-related offences at the Magistrate Court level in 2021. Imprisonment was rare, and likewise few persons received sentences such as "Community Service", "Bond", "Probation" and "Conditional Discharge" (See Table 6). There was also a small number of instances in which persons were "Discharged", had their charges "Dismissed/Withdrawn", received a "Suspended Sentence" or were sentenced to "Time Served" (See Table 6).

	SENTENCE OUTCOME																	
OFFENCE	Fine	Imprisonment	CRD	R&D	Community Service & CRD	Community Service & R&D	Community Service	Bond	Conditional Discharge	Dismissed/ Withdrawn	Probation	Probation & CRD	Probation & R&D	Suspended Sentence	Discharge	Time Served	Unknown	TOTAL
Possession	41	1	46	44	1	10	1	11	1	4			2		1	1	1	165
Importation	6			1						2								9
Trafficking	22	1	46	66	1	7	8	10	1	2			1	5	10	1		181
Intent to Supply	7		50	93		5	16	6	1	9		1				1		189
Cultivation	13	1	8	9	1		4	15		1	1			4				57
Possession of Apparatus	2		2	5				2										11
Conspire to Traffic Cannabis	1									2								3
Possession within Radius of 100 yards of school premises			1	2														3
TOTAL	92	3	153	220	3	22	29	44	3	20	1	1	3	9	11	3	1	618

Table 6: Magistrates' Court Sentence Outcomes for Cannabis Offenses in 2021 by Offence Type

Source: Criminal Justice Research & Planning Unit

Cocaine

Table 7 presents the cocaine-related offences tried at the Magistrates' Court level during 2021. When compared to the data presented in Table 6, it can be seen that the number of cocaine-related cases was significantly lower than the number of marijuana-related cases, and there were also fewer offence types. This is in keeping with the distribution of drug-related offences recorded by the Barbados Police Service.

From Table 7 it can be seen that "Intent to Supply", "Trafficking" and "Possession of Apparatus" were the top three cocaine-related offences adjudicated within the Magistrates' Courts. Fewer cases were heard for "Possession" and "Importation" (See Table 7). There was also a single case involving "Possession within a Radius of 100 yards of School Premises" (See Table 7).

"CRD", "R&D" and "Fine" were the three most common sentences applied to persons tried for cocainerelated offences (See Table 7). However, for cases involving the "Possession of Apparatus", "Imprisonment" was most likely (See Table 7). "Time Served", "Community Service", "Bond" and "Suspended Sentence" were the least common sentence outcomes on record (See Table 7). There were also 11 instances in which charges were "Dismissed/Withdrawn" (See Table 7). This most commonly occurred in cases involving "Trafficking" and "Intent to Supply".

	SENTENCE OUTCOME									
OFFENCE	Fine	Imprisonment	CRD	R&D	Community Service	Bond	Suspended Sentence	Time Served	Dismissed/ Withdrawn	TOTAL
Possession	2		4	3				2		11
Importation	6		1						2	9
Trafficking	1	1	7	1	2	1			4	17
Intent to Supply	2		6	5	1				4	18
Possession of Apparatus	1	5	2	3			1	3	1	16
Possession within Radius of 100 yards of school premises			1							1
TOTAL	12	6	21	12	3	1	1	5	11	72

Table 7: Magistrates' Court Sentence Outcomes for Cocaine Offences in 2021 by Offence Type

Source: Criminal Justice Research & Planning Unit

Methamphetamine

There were 2 methamphetamine-related offences adjudicated in the Magistrates' courts in 2021: "Possession of Methamphetamine" and "Intent to Supply" (See Table 8). The sentence outcomes included "Bond" for the "Possession" charge and "R&D" for the "Intent to Supply" charge (See Table 8).

OFFENCE	SENTENCE OUTCOME		
	Bond	R&D	TOTAL
Possession	1		1
Intent to Supply		1	1

1

1

Table 8: Magistrates' Court Sentence Outcomes for Methamphetamine Offences in 2021 by Offence Туре

Source: Criminal Justice Research & Planning Unit

2

Other Drugs

Intent to Supply

TOTAL

Table 9 presents the sentence outcomes for "Possession", "Trafficking", "Intent to Supply" and "Possession of Apparatus" for a controlled drug. In each case, the drug was not specified. Much like the cannabis- and cocaine-related offences, the "Possession", "Trafficking" and "Intent to Supply" charges typically resulted in a "CRD" or "R&D" (See Table 9). The lone "Possession of Apparatus" charge resulted in a "Bond" (See Table 9).

Table 9: Magistrate Court Sentence Outcomes for Other Drug Offences in 2021 by Offence Type

	SENTENCE OUTCOME				
OFFENCE	CRD	R&D	Suspended Sentence	Bond	TOTAL
Possession of a Controlled Drug: Not Stated	2	7			9
Trafficking of a Controlled Drug: Not Stated	1	3	1		5
Intent to Supply a Controlled Drug: Not Stated	2	3			5
Possession of Apparatus for a Controlled Drug: Not Stated				1	1
TOTAL	5	13	1	1	20

Source: Criminal Justice Research & Planning Unit

5.3 Government Industrial School

Forty-seven wards were committed/remanded to the Government Industrial School (GIS) in 2021, the majority of whom were males between the ages of 13 and 15 years (See Figures 115 and 116).

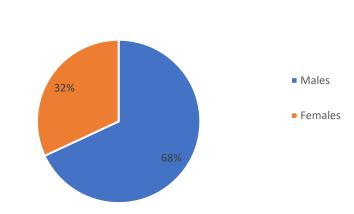


Figure 115: Gender Distribution of Wards Remanded/Committed to the Government Industrial School in 2021

Source: Government Industrial School

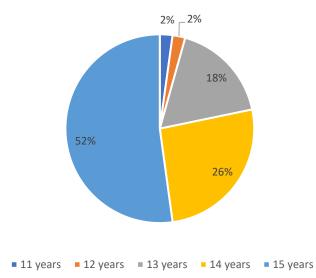


Figure 116: Age Distribution of Wards Remanded/Committed to the Government Industrial School in 2021

Source: Government Industrial School

Figure 117 presents the offences for which wards were committed/remanded to the School during the year. From the Chart it can be seen that "wandering" was the most common offence for females, followed by "refractory behaviour", "threats", "assault occasioning actual bodily harm" and "breach of probation". Figure 117 also shows that males were committed/remanded for a wider range of offences, many of which were more serious in nature. The most common offences among males were "assault occasioning actual bodily harm" and "criminal damage".

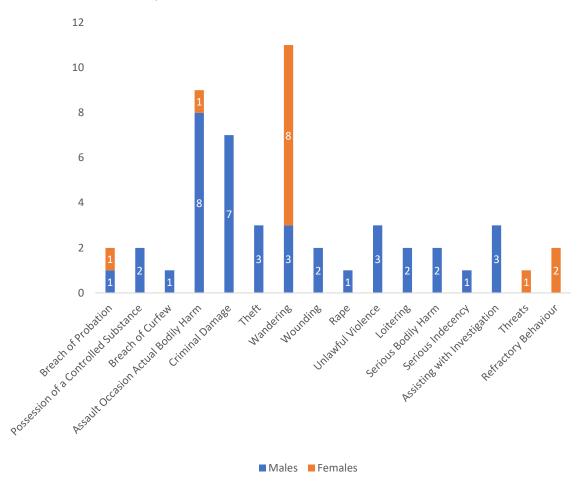
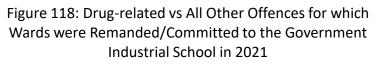


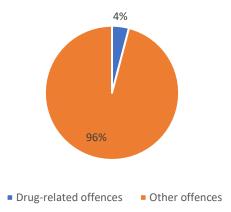
Figure 117: Gender Distribution of Offences for which Wards were Remanded/Committed to the Government Industrial School in 2021

Source: Government Industrial School

Drug-related Offences

Drug-related offences were among the minority, accounting for only 2 (4%) of the 52 offences on record in 2021(See Figure 118). Both offences were "possession of a controlled substance" (See Figure 117). In each case, the substance was marijuana. It should be noted that both wards charged with this offence were 15 year old males.

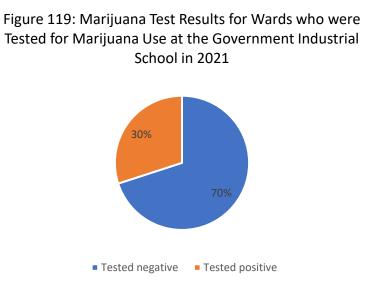




Source: Government Industrial School

Drug Testing

Court-ordered drug tests were conducted on 10 of the 47 wards at the GIS in 2021. Three wards (30%) tested positive for marijuana use (See Figure 119). Table 10 presents the drug test results for these individuals. From the Table it can be seen that all three wards were male - two were age 15 and one was age 14.



Source: Government Industrial School

 Table 10: Positive Marijuana Test Results for Wards Committed to the Government Industrial School

 in 2021

Ward	Age	Result
Male 1	14	55 ng/ml
Male 2	15	51 ng/ml
Male 3	15	747 ng/ml

Source: Government Industrial School

6 Select Trend Analysis

This section presents select trends pertaining to: drug prevention efforts by the NCSA; students admitted to the Edna Nicholls Centre; the profile of persons seeking treatment in Barbados; and drug offences recorded by the Barbados Police Service.

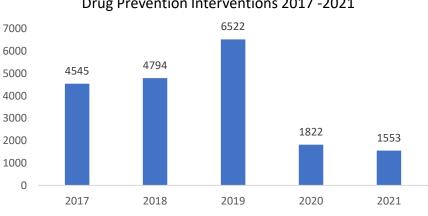
Where possible, five-year trends are offered. However, in some instances only three-year analyses were possible due to the unavailability of earlier data and/or variations in data collection over time.

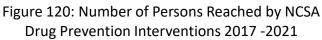
In an addition to the trend analyses, a comparison of the 2019 and 2021 marijuana possession cases adjudicated in the Magistrates' Courts is also presented.

Prevention and Drug Education

National Council on Substance Abuse

Figure 120 presents the number of persons reached by NCSA's drug prevention interventions within schools and the community during the five-year period 2017 through 2021. From the Chart it can be seen that there was a marked reduction in the number of persons reached following the onset of the COVID-19 pandemic in 2020, and there was a further reduction in 2021 – the second year of the pandemic (See Figure 120). The number of persons reached in 2021 is likely less than that in 2020 due to the fact that the pandemic was declared in *March* 2020 whereas the pandemic and associated public health measures affected 2021 in its entirety.





The distribution of persons taking part in NCSA's interventions during the period 2017 through 2021 is presented by Programme/Department in Figure 121. Between 2017 and 2020, school interventions (primarily those conducted by the Primary School Programme) accounted for the majority of persons reached by the Council. However, in 2021, there was a significant shift in the distribution, whereby approximately 7 out of every 10 persons reached by the Council took part in Community interventions.

Source: Barbados Drug Information Network

This shift is likely due in large part to the heavy reliance on online schooling throughout 2021 which made it difficult to interface with the school population. Nevertheless, the NCSA did conduct online interventions within the schools and this was made possible by the Council's decision to transition all of its prevention programming into an online format throughout the first two years of the pandemic.

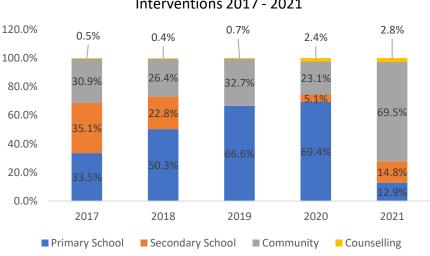


Figure 121: Distribution of Persons Reached by NCSA's Interventions 2017 - 2021

Edna Nicholls Centre

The number of students admitted to the Edna Nicholls Centre between 2017 and 2022 can be seen in Figure 122. The Chart shows that, like the NCSA, the Centre had a marked reduction in the number of admissions following the onset of the pandemic (See Figure 122). This too is likely due to the reliance on online schooling which resulted in the Centre having no admissions for two of the school terms during the calendar year.

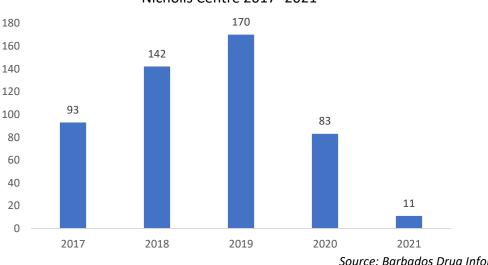


Figure 122: Number of Students Admitted to the Edna Nicholls Centre 2017 -2021

Source: Barbados Drug Information Network

Source: Barbados Drug Information Network

Figure 123 presents the percentage of students testing positive for marijuana use on admission to the Centre between 2017 and 2021. The Chart shows a significant increase in the percentage of students testing positive in 2021 (See Figure 123). This is mostly likely attributable to the small number of admissions during that year.





Throughout 2017 and 2021, males and students between the ages of 14 and 15 consistently accounted for the majority of persons testing positive for marijuana use on admission to the Centre (See Figures 124 and 125).

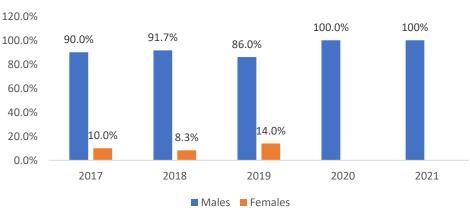


Figure 124: Gender Distribution of Students Testing Positive for Marijuana Use on Admission to the Edna Nicholls Centre between 2017 and 2021

Source: Barbados Drug Information Network

Source: Barbados Drug Information Network

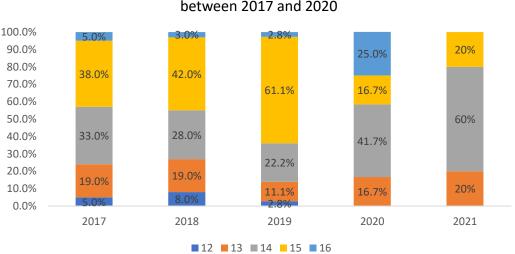


Figure 125: Age Distribution of Students Testing Positive for Marijuana Use on Admission to the Edna Nicholls Centre between 2017 and 2020

Source: Barbados Drug Information Network

Treatment

Figures 126 through 129 present a compilation of admission data from all contributing treatment centres for the period 2019 through 2021.

Figure 126 reveals that the number of persons seeking treatment decreased in 2020 (following the onset of the pandemic) and further decreased in 2021. As with the NCSA and Edna Nicholls Centre, these reductions are also mostly likely attributable to the pandemic and associated public health measures which affected the operations of the treatment centres e.g. reduced opening hours, inability to see clients/patients in person during lockdowns, etc.

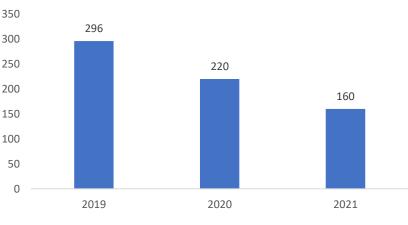


Figure 126: Number of Persons Seeking Drug Treatment in Barbados 2019-2021

Source: Barbados Drug Information Network

With regards to age and gender, Figures 127 and 128 show that males and persons 40 and under were the main treatment seekers during the three-year period (2019-2021).

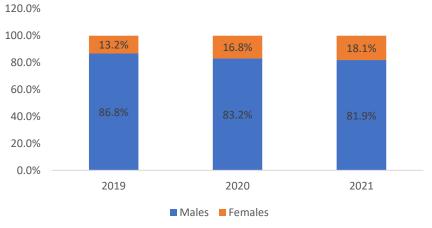
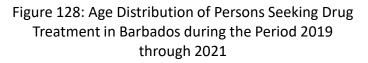
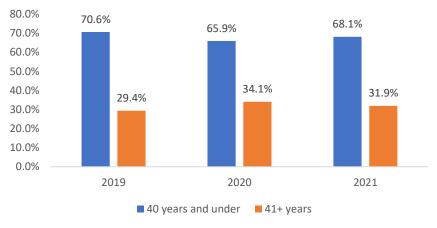


Figure 127: Gender Distribution of Persons Seeking Drug Treatment in Barbados 2019 - 2021

Source: Barbados Drug Information Network





Source: Barbados Drug Information Network

Figure 129 shows that while approximately three quarters of persons seeking drug treatment in 2019 were treated for single drug use, there was a marked increase in persons seeking treatment for poly drug use in 2020 and 2021. As such, these persons accounted for just over half of the treatment admissions during that two-year period. This trend will need continued monitoring to determine if this increase maintains over time.

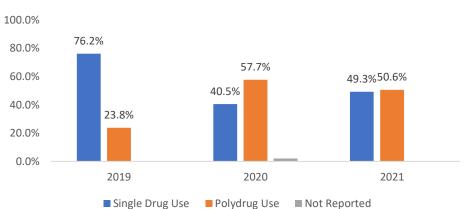
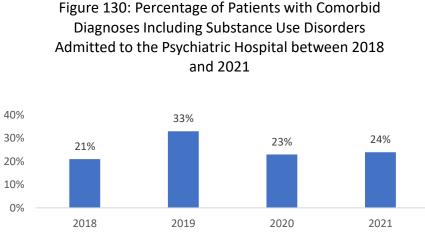


Figure 129: Distribution of Persons Seeking Treatment in Barbados for Polydrug vs Single Drug Use during the Persion 2019 - 2021

Figure 130 presents the percentage of patients with comorbid diagnoses including substance use disorders who were admitted to the Psychiatric Hospital between 2018 and 2021. From the Chart it can be seen that between one-fifth and one quarter of the Hospital's patients typically have such diagnoses. However, the proportion was as high as one-third in 2019.



Source: Barbados Drug Information Network

Based on the data in Figures 129 and 130, it can be concluded that poly drug use and comorbid diagnoses are common issues seen within treatment centres in Barbados. This is noteworthy given the need for specialized training and treatment approaches when catering to clients/patients who use multiple substances and/or have co-occurring mental health disorders.

Source: Barbados Drug Information Network

Supply Reduction

The Barbados Police Service

Figures 131 and 132 show that between 2017 and 2021, males and those under the age of 40 were the primary persons charged with drug offences, while Figure 133 reveals that cannabis offences were the most numerous during this period. They accounted for between eight and nine out of every 10 drug offences on record.

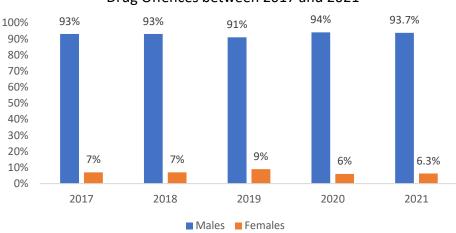


Figure 131: Gender Distribution of Persons Charged with Drug Offences between 2017 and 2021

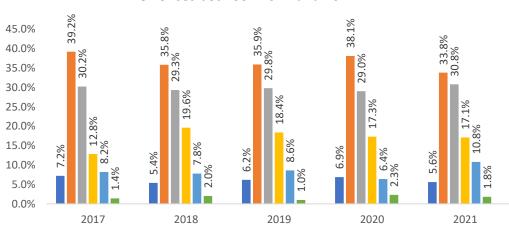
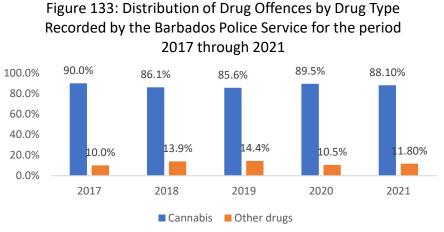


Figure 132: Age Distribution of Persons Charged with Drug Offences between 2017 and 2021

■ 10-19 years ■ 20-29 years ■ 30-39 years ■ 40-49 years ■ 50-59 years ■ 60+ years ■ Unknown

Source: Barbados Drug Information Network

Source: Barbados Drug Information Network



Source: Barbados Drug Information Network

Figure 134 presents the distribution of cannabis offences between 2017 and 2021. During this five-year period, "Possession" of cannabis was the single most common cannabis offence, likely due to it being a predicate offence i.e. one which accompanies more serious offences.

The Chart also shows that the percentage of "Possession" charges continuously declined from 2019 onwards while the percentage of "Trafficking" and "Offering to Supply" charges simultaneously increased. These changes coincide with changes in marijuana-related legislation which took place between 2019 and 2021 and may therefore be a reflection of fewer persons being charged with small-scale possession (likely intended for personal use). This will be discussed in greater detail in the Discussion section.



Figure 134: Distribution of Cannabis Offences Recorded

Source: Barbados Drug Information Network

Criminal Justice Research and Planning Unit

While not a trend analysis, Figure 135 presents an interesting comparison. It shows the number of cannabis possession cases adjudicated in the Magistrates' Courts in 2019 and the number adjudicated in 2021. From the Chart it can be seen that there was a marked decrease in 2021, which equated to a reduction of approximately 71.5%. This reduction also coincides with the changes in marijuana-related legislation, particularly the introduction of a fixed penalty (decriminalization) for the possession of 14 grammes or less of cannabis

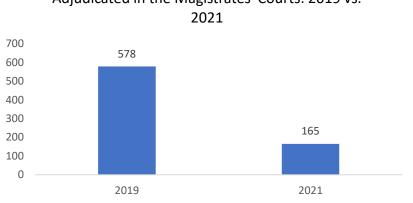


Figure 135: Number of Cannabis Possession Cases Adjudicated in the Magistrates' Courts: 2019 vs.

Source: Barbados Drug Information Network

7 Discussion

The current report suggests that the local drug situation remained unchanged in 2021. As in previous years, alcohol, marijuana and cocaine were dominant. These were the three main substances for which treatment was sought while marijuana was the primary drug capturing the attention of law enforcement officials (arrests, seizures) and the judiciary.

There were comparatively fewer reports of treatment admissions, arrests and drug seizures involving non-traditional substances. Nevertheless, the data does point to the continued presence of such substances – primarily ecstasy and methamphetamine - on the local drug scene. Also of note, are the reports, albeit limited, of persons seeking treatment for the misuse/abuse of prescription drugs. This report presents data regarding treatment for the use of benzodiazepines. This was also highlighted in earlier reports as was treatment for the use of the anesthetic drug ketamine.

Impact of Changing Marijuana Legislation

In 2019, the Medicinal Cannabis Act and the Sacramental Cannabis Act were enacted, thereby making provisions for: 1) the legal production, prescription and use of cannabis for medicinal purposes, and 2) the legal cultivation and use of cannabis for religious purposes by Rastafarians. These legislative changes were followed by an amendment to the Drug Abuse Prevention and Control Act Cap. 131 in March 2021. This amendment removed criminal penalties for the possession of 14 grammes or less of cannabis. Instead, persons found to be in possession of this amount will now receive a fixed penalty (fine of \$200). In addition, the law also requires those 18 years and over who are found to be in possession of the allowed amount *and* thought to be dependent on the substance to be referred to the NCSA for assessment and subsequent counselling *if needed*. All persons under 18 years will receive the same fine but are to be referred to the NCSA for *mandatory* assessment and counseling.

The trend analysis data in the current report shows a steady decline in the number of persons charged with cannabis possession from 2019 onwards. This coincides with, and may possibly be due in part to, the above-mentioned legislative changes, particularly the 2021 decriminalization of small-scale cannabis possession. Avoiding a criminal record has advantages at the individual level, as such a record can negatively affect employment opportunities, receiving travel visas, etc. (Minor, Persico, & Weiss, 2018; U.S. Department of State, n.d.).

At the judicial level, a reduction in the number of persons charged translates into fewer cases to be adjudicated thereby reducing the load on the penal system and any associated costs, including those related to the incarceration of individuals receiving a custodial sentence. Data coming out of Jamaica revealed an approximate 75% reduction in the number of cannabis possession cases tried in that island's law courts following decriminalization in 2015, and continued reductions were observed thereafter (Cummings, 2018). The Barbadian data suggests something similar: in 2019 (before decriminalization) there were 578 cannabis possession cases tried within the Magistrate's courts (National Council on

Substance Abuse, 2021), and in 2021 (the year decriminalization took place) there were 165 such cases. This equates to a reduction of approximately 71%. This is the first possible comparison following decriminalization, and continued monitoring will be needed to determine if this reduction maintains over time.

Portugal was the first country to decriminalize drug use and the possession of small amounts of *all* illicit drugs, including marijuana. To date, Portugal has not recorded major increases in drug use but instead has observed decreases in problematic use and adolescent use as well as public health harms and social issues associated with drug use (Drug Policy Alliance, 2015; 2019). Their success is likely due to their approach to decriminalization which included the simultaneous expansion of treatment and harm reduction services (Drug Policy Alliance, 2015).

While the amendment to the Drug Abuse Prevention and Control Act Cap. 131 makes provision for persons to be referred to the NCSA for assessment and counselling, the Council has not observed an increase in counselling clients despite the recorded reduction in persons being charged with, and tried for, marijuana possession. The lack of increase may be due to: 1) the age of persons being found in possession of 14 grammes or less of cannabis (they may all be 18 years or over), 2) the police not deeming them to be dependent on the substance and in need of a referral to the NCSA or 3) accused persons not agreeing/consenting to attend counselling sessions at the NCSA. Nevertheless, this should be investigated, and discussions held with the relevant parties to ensure that those truly in need of assessment and counselling are diverted to the NCSA in accordance with the law.

Additionally, Barbados should follow the example set by other countries and examine the impact which the recent legislative changes may have on marijuana use at the national level and within specific populations e.g. adolescents and other vulnerable groups. To date, evidence emerging from international studies has been mixed: while some studies have found that relaxed marijuana laws do not affect patterns of use (e.g. Khatapoush & Hallfors, 2004; Lynne-Landsman, Livingston & Wagenaar, 2013), others have found a relationship between the two. For example, Wen, Hockenberry and Cummins (2015) found medicinal marijuana laws to be associated with the increased probability of current marijuana use, regular marijuana use and marijuana dependence in ten states across the United States of America. Similarly, Miech, Johnston, O'Malley, Backman, Schulenberg and Patrick (2015) found that following the 2010 decriminalization of marijuana use positively, report current marijuana use and predict that they would be using marijuana within the upcoming five year period. Californian 12th graders in the study were also less likely to perceive regular marijuana use as a great health risk or to strongly disapprove of regular marijuana use (Miech et al, 2015).

Within the region, Spencer and Strobl (2020) investigated the impact of decriminalization on marijuana and alcohol consumption among a national sample of persons aged 12 to 65 in Jamaica. More specifically, they focused on the relationship between persons' awareness of the decriminalization and the use of these substances. These researchers found an increase in the incidence and frequency of marijuana use among Jamaicans who were aware of the decriminalization. They also found that youth who were aware of the legislative change were 10% more likely to initiate/try marijuana use for the first time.

Studies such as these highlight the potential impact which the recently relaxed laws may have on marijuana use and therefore underscore the need for continuous monitoring and research on the topic, as the associated findings will help to guide an evidence-based approach to prevention programming and policy development. The NCSA's Secondary School Survey which is slated for conduct during the 2022/23 academic year should help to address this data gap. However, efforts should also be made to conduct a general population survey and other studies which target special populations. These can be conducted using quantitative or qualitative methodologies and can also include a rapid assessment approach for more speedy results if needed.

Reduced Treatment Uptake

A comparison of the treatment data for the three-year period 2019 through 2021 shows a marked reduction in the number of persons seeking treatment for substance use disorders in Barbados since the onset of the COVID-19 pandemic. More specifically, there was a reduction in treatment admissions of approximately one-quarter between 2019 and 2020 and again between 2020 and 2021. Anecdotal reports suggests that this is most likely due in large part to the changes in operations brought about by the public health measures, including curfews and national shutdowns, which were used to curb the spread of the virus, as opposed to reduced need or demand for the services.

This is concerning as drug use and substance use disorders are associated with various social and health issues, including the potential for infectious diseases (e.g. HIV, Hepatitis) and non-communicable diseases (e.g. heart disease, high blood pressure, Chronic Obstructive Pulmonary Disease) as well as homelessness, unemployment and crime just to name a few (Nyashanu & Visser, 2022). While issues such as these can affect individuals and their families, they also have far-reaching effects at the societal level, including obvious potential threats to public health and safety, and ultimately translate into increased government expenditure on health care, social support (e.g. welfare, housing, etc.), crime prevention and the penal system (International Narcotics Control Board, 2014).

As such, every effort must be made to increase treatment access and uptake among those in need to ensure that the downward trend does not continue, but instead recovers, returning to – or exceeding – pre-COVID levels. This should include identifying and addressing treatment barriers. International research suggests that traditional barriers include a perceived lack of need for treatment, fear of stigmatization, lack of knowledge regarding available treatment options, privacy concerns, fragmented healthcare/treatment services which make it difficult for persons to seek treatment, lack of much-needed wraparound services, and a shortage of adequately trained personnel just to name a few (Nyashanu & Visser, 2022; Rizzo, Mu, Cotroneo & Arunogiri, 2022; Taylor, 2010).

In Barbados, one potential treatment barrier may be related to the Psychiatric Hospital's role in the treatment process – both as a provider of outpatient treatment services and as the clearing house for residential treatment. As the latter, persons in need of residential treatment and who are desirous of having their treatment sponsored by the Government must be assessed at the Hospital and subsequently referred to the Substance Abuse Foundation. Preliminary findings from the NCSA's study "Barriers to substance abuse treatment in Barbados: Factors hindering women's use of treatment services" suggest that the stigma associated with the Psychiatric Hospital often makes persons reluctant

to go to that institution – whether for outpatient treatment or for residential treatment assessment and referral. As such, it is recommended that consideration be given to relocating the Drug Rehabilitation Unit and/or decentralizing the assessment and referral process for residential treatment in an effort to reduce the impact of the stigma associated with the Hospital.

Also impactful is a lack of knowledge regarding addiction, treatment options and the treatment process (Rizzo, Mu, Cotroneo & Arunogiri, 2022). A public education campaign may be useful in addressing this barrier and can include the use of traditional and social media to raise awareness about addiction, including what it is, who may be affected and where persons can get help. Likewise, the messages should also focus on destigmatizing addiction given that fear of stigma is a well-documented treatment barrier (McGinty & Barry, 2020).

Continued Predominance of Young People involved in the Local Drug Situation

This report highlights the fact that persons in the 40 and under age category continue to dominate the local drug situation, accounting for the majority of drug treatment admissions and drug-related arrests. This is a critical segment of the population: They represent the future of the Barbadian society and simultaneously account for approximately half of the labour force¹⁰. This, together with the fact that the under 60 population - of which those 40 and under are a part - is rapidly shrinking (Pan American Health Organization [PAHO], 2020)¹¹, highlights an area of concern for the country's social and economic outlook.

As such, it is recommended that there be an increased focus on the 40 and under age group among professionals in the prevention, treatment and rehabilitation sectors. These specialists should use evidence-based interventions designed to meet the specific needs of this population in an attempt to reduce their involvement in the drug situation.

At the policy level, it is recommended that the areas of prevention, treatment and rehabilitation be included in the Barbados Population Policy. This Policy is being developed to address the issue of our aging population and the associated developmental challenges and opportunities (current and anticipated). More specifically, it is recommended that the Policy include a component that speaks to: 1) the delivery of drug prevention education and other drug prevention initiatives; 2) increasing the availability of, and access to, treatment for drug use disorders and 3) the provision of rehabilitation and diversion programmes for drug offenders. It is envisioned that these initiatives will help to protect future generations and increase the productive sector of the workforce.

Both of the aforementioned recommendations coincide with Target 3.5 of the Sustainable Development Goals (SDGs) which speaks to strengthening the prevention and treatment of substance abuse, including narcotic drug abuse and the harmful use of alcohol. This falls under the ambit of Goal 3 which is to

¹⁰ The Barbados Labour Force Survey conducted in the second quarter of 2021 revealed that, at the time of the survey, 53.5% of the labour force was age 44 and under (Barbados Statistical Service, 2021).

¹¹ Barbados has one of the most rapidly aging populations in the world (Madden, 2022).

"Ensure healthy lives and promote well-being for all at all ages" and is important as overall health and well-being is critical to the development of prosperous societies (United Nations, 2020).

Certification of Prevention and Treatment Professionals

The prevention and treatment of substance abuse in Barbados can be further strengthened through the certification of persons working within these fields. At present, there is no formal certification process, and this is a significant shortcoming as certification safeguards the quality of services offered by ensuring that professionals meet minimum requirements and maintain competence in their respective areas (Excel Medical, 2022; Greiner & Knebel, 2003). As such, it is recommended that a Certification Board be established and that this Board be responsible for identifying and enforcing certification requirements for the provision of prevention and treatment services in Barbados. In addition, the Board should also mandate continuing education and re-registration at set intervals to ensure that professionals remain current within their field. Certification and continuing education is especially critical given the proportion of persons seeking treatment for poly drug use and/or who have comorbid diagnoses (mental health disorder and substance use disorder), as these often require specialized training.

It should be noted that in addition to aligning with Target 3.5 of the SDGs, the implementation of certification and continuing education would also address areas of concern¹² identified by the Organization of American States in its 2021 assessment of Barbados' prevention, treatment and recovery support measures (Organization of American States [OAS], 2021).

BARDIN Data Collection: Continued Challenges and Possibilities for Expansion

Despite this being the 11th BARDIN report, the late submission, and in some cases non-submission, of data by Network members is a persistent issue which has hampered the timely preparation of reports since the re-launch of BARDIN in 2011. The absence of critical data prevents a full understanding of the drug situation while late submissions prevent the timely distribution of reports and, by extension, hinders the development of a national response which is based on *up-to-date* evidence.

It should be noted that no improvements have been observed despite efforts to formalize submission agreements through the signing of Memoranda of Understanding in 2019. As such, alternative approaches should be considered. These may include: leveraging the buy-in from senior government officials, educating Network members about the utility of BARDIN reports and data in their everyday practice, and hosting semi-annual Network meetings. It is envisioned that such meetings will provide a setting where members can learn about/share any new developments on the local drug scene and be exposed to training designed to enhance their data collection procedures. It is also hoped that these

¹² The Organization of American States through its Inter-American Drug Abuse Control Commission (CICAD) is currently conducting the 8th Round of the Multilateral Evaluation Mechanism (MEM) using a phased approach. The first phase was conducted in 2021 and examined prevention, treatment and recovery support measures in member states. In the assessment report for Barbados, CICAD noted with concern that the island does not certify personnel working in prevention, treatment, rehabilitation and social integration services nor does it implement ongoing competency-based training for such professionals.

meetings will allow Network members to develop a common identity and a collective purpose as it pertains to BARDIN.

The NCSA continues to look for ways to expand BARDIN so as to provide a fuller understanding of the drug situation. Possibilities for expansion include the addition of new contributing members and new indicators. To this end, the inclusion of the following should be considered:

- 1) The number of drug-related deaths and drug-related accidents/injuries from the Queen Elizabeth Hospital or other relevant sources. If available, this will provide an indication of drug-related mortality and morbidity.
- 2) The number of persons charged for driving while under the influence of alcohol and the sentence outcomes for such offences brought before the law courts. This will require enforcement of the Road Traffic (Amendment) Act, 2017, which allows for the use of breathalyzer testing as well as blood and urine testing to assess alcohol intoxication. Such data will provide insight into this significant threat to public safety.
- The results of drug/substance identification analyses conducted by the Forensic Sciences Centre. This will give an indication of the drugs in circulation – particularly new and emerging substances.

Summary of the Recommendations to Enhance the National Response to the Drug Situation

Below is a summary of the recommendations emerging from the foregoing discussion.

- Efforts should be made to investigate the reasons why NCSA has not observed an increase in persons referred for assessment and counselling despite the provision for such referrals within the Drug Abuse (Prevention and Control) (Amendment) Act, 2021. Discussions should also be held with the relevant stakeholders, with a special emphasis on the Barbados Police Service, to ensure that those found in possession of 14 grammes or less of marijuana and who meet the necessary criteria are diverted to the NCSA as outlined in the Act.
- 2. Studies should be conducted to investigate the impact of relaxed marijuana legislation on patterns of marijuana use in Barbados. These should focus on both the general population as well as specific sub-populations, including adolescents and other vulnerable groups. Large, nationally representative surveys and small-scale rapid assessments can be used, as can quantitative and qualitative methodologies. The results from such studies should be incorporated into an evidence-based approach to prevention programming and policy development.
- 3. Efforts should be made to increase the number of persons seeking treatment for substance use disorders, such that they return to or exceed pre-COVID numbers. These should include:
 - a. Identifying and addressing barriers to treatment in order to ensure the appropriate allocation of resources.
 - b. Giving special consideration to relocating the Drug Rehabilitation Unit from its current location at the Psychiatric Hospital and/or decentralizing the assessment and referral process for residential treatment. This should reduce the impact which the stigma

associated with the Hospital has on treatment seeking and create easier access to treatment resources.

- c. Implementing a public education campaign regarding addiction, treatment options and the treatment process. The lack of knowledge regarding these areas is a well-documented barrier. The messages should also focus on destigmatizing addiction.
- 4. Efforts should be made to address the high proportion of persons in the 40 and under age category who are involved in the drug situation:
 - a. There should be an increased focus on this population by professionals in the prevention, treatment and rehabilitation sectors. These specialists should utilize evidence-based interventions designed to meet the specific needs of this age group.
 - b. The Barbados Population Policy should include the areas of prevention, treatment and rehabilitation, as the 40 and under age group accounts for a large percentage of the workforce. More specifically, the Policy should include a component that speaks to: 1) the delivery of drug prevention education and other drug prevention initiatives; 2) increasing the availability of, and access to, treatment for drug use disorders and 3) the provision of rehabilitation and diversion programmes for drug offenders.
- 5. In an attempt to strengthen the provision of treatment and prevention services, a Certification Board should be established and registration/certification should be mandatory for professionals within these fields. The Certification Board should be responsible for identifying and enforcing certification requirements and should also mandate continuing education and reregistration at set intervals to ensure that these specialists remain current within their field.
- 6. There should be continued efforts to increase the timeliness of BARDIN submissions from Network members. These can include:
 - a. Leveraging buy-in from senior government officials
 - b. Educating Network members about the utility of BARDIN reports and data in their everyday practice
 - c. Hosting semi-annual Network meetings where members can share new developments in the field, be exposed to data collection training and ultimately develop a common identity and a collective purpose as it pertains to BARDIN.
- 7. Consideration should be given to expanding the BARDIN indicators to include:
 - a. The number of drug-related deaths and accidents/injuries
 - b. The number of persons charged with driving while under the influence of alcohol and the sentence outcomes for such offences brought before the law courts.
 - c. The results of drug/substance identification analyses conducted by the Forensic Sciences Centre.

8. Conclusion

The drug situation in Barbados remains largely the same: alcohol, marijuana and cocaine continue to dominate and persons 40 and under are most likely to be involved – either as treatment seekers or as criminal offenders. The substantial involvement of this age group is of concern given Barbados' rapidly aging population and the fact that this subpopulation constitutes a significant portion of the workforce. As such, specialized policies and interventions (prevention, treatment, rehabilitation) designed to address the realities of this group will be needed to protect the island's social and economic future.

Despite the continued prevalence of alcohol, marijuana and cocaine, the data once again reveals the small-scale presence of non-traditional substances, of which ecstasy is the most common. This, together with the occurrence of poly drug use and comorbid disorders, highlights the need for specially trained professionals, particularly within the treatment and prevention fields. One way to ensure that these specialists meet minimum requirements, and by extension ensure the quality of their services, is through mandatory certification and continuing education.

The COVID-19 pandemic continued to have a notable impact on the treatment sector in 2021, due in large part to the operational changes brought about by the public health measures used to curb the spread of the virus. As a result, there was a reduction in the number of persons reached by these agencies. Given the deleterious health and social issues associated with drug use, steps must be taken to increase their reach going forward, and particular emphasis must be placed on identifying and removing barriers to treatment.

Early findings suggest that the recent relaxation of marijuana-related laws has led to a reduction in the number of persons charged with marijuana possession and by extension the number of persons being tried for this offence. This can be positive for both the individual and the penal system; however, it is important that those who may be dependent on the substance receive the requisite professional help. While the Drug Abuse (Prevention and Control) (Amendment) Act, 2020 makes provisions for persons to be referred to the NCSA for assessment and counselling, discussions among key stakeholders will be pivotal to determining if the current identification/referral system is effective or if changes are needed.

Efforts should also be made to investigate the potential impact which the legislative changes may be having on drug use patterns, particularly the use of marijuana. Such findings will be key to developing appropriate, evidence-based prevention approaches and mitigating any unintended fall-out.

9. References

- Barbados Statistical Service (2021). *Statistical bulletin: Continuous Household Labour Force Survey, April to June 2021.* Retrieved from: https://stats.gov.bb/wpcontent/uploads/2021/09/LFS_Bulletin_2Q2021.pdf
- Cummings, J. (2018). *Impact of decriminalization of ganja on the legal system in Jamaica*. Retrieved from: https://www.sknis.gov.kn/wp-content/uploads/2019/07/Appendix-8.-St.-Kitts-Bar-Association-Presentation-Jacqueline-Cummings-Gordon-Martin.pdf
- Drug Policy Alliance (2015). Drug decriminalization in Portugal: A health-centred approach. Retrieved from: https://drugpolicy.org/sites/default/files/DPA_Fact_Sheet_Portugal_Decriminalization_Feb2015 .pdf
- Drug Policy Alliance (2019). Drug decriminalization in Portugal: Learning from a health and humancentered approach. Retrieved from: https://www. drugpolicy. org/sites/default/files/dpa-drugdecriminalization-portugal-healthhuman-centered-approach_0. pdf.
- Excel Medical (2022, September 25). *The benefits of certification for healthcare providers*. Retrieved from: https://www.excel-medical.com/the-benefits-of-certification-for-healthcare-providers/
- Government of Barbados (2017). *Road Traffic (Amendment) Act, 2017*. Retrieved from: https://www.barbadosparliament.com/uploads/bill_resolution/9ba85d692572392e080c69e2c5 d735d4.pdf
- Government of Barbados (2019). *Medicinal Cannabis Industry Act, 2019*. Retrieved from: https://www.barbadosparliament.com/uploads/bill_resolution/649f0a83657d6e8a0ae7ec0e10 894863.pdf
- Government of Barbados (2019b). *Sacramental Cannabis Act, 2019*. Retrieved from: https://www.barbadosparliament.com/uploads/bill_resolution/c4433732d6d7e8242403e549be 66dcae.pdf
- Government of Barbados. (2021). Drug Abuse (Prevention and Control) (Amendment) Act, 2020. Retrieved from: https://www.barbadosparliament.com/uploads/bill_resolution/bf5de517235175cae509e4c806 6fd300.pdf
- Greiner, A. C., & Knebel, E. (2003). Health professions oversight processes: What they do and do not do, and what they could do. *Health professions education: A bridge to quality.*

- International Narcotics Control Board. (2014). *The report of the International Narcotics Control Board for 2013.* Retrieved from: https://www.incb.org/documents/Publications/AnnualReports/AR2013/English/AR_2013_E.pdf
- Khatapoush, S., & Hallfors, D. (2004). "Sending the wrong message": Did medical marijuana legalization in California change attitudes about and use of marijuana?. *Journal of Drug Issues*, *34*(4), 751-770.
- Lynne-Landsman, S. D., Livingston, M. D., & Wagenaar, A. C. (2013). Effects of state medical marijuana laws on adolescent marijuana use. *American Journal of Public Health*, *103*(8), 1500-1506.
- Madden, M. (2022, July 9). Older, sicker population could spell peril for economy. *Barbados Today*. https://barbadostoday.bb/2022/07/09/older-sicker-population-could-spell-peril-for-economy/
- McGinty, E. E., & Barry, C. L. (2020). Stigma reduction to combat the addiction crisis—developing an evidence base. *New England Journal of Medicine*, *382*(14), 1291-1292.
- Miech, R. A., Johnston, L., O'Malley, P. M., Bachman, J. G., Schulenberg, J., & Patrick, M. E. (2015). Trends in use of marijuana and attitudes toward marijuana among youth before and after decriminalization: The case of California 2007–2013. *International Journal of Drug Policy*, *26*(4), 336-344.
- Minor, D., Persico, N., & Weiss, D. M. (2018). Criminal background and job performance. *IZA Journal of Labor Policy*, 7(1), 1-49.
- National Council on Substance Abuse (2021). *Barbados Drug Information Network report: An analysis of the 2019 data*. Retrieved from: https://www.ncsa.gov.bb/Download.ashx?file=Attachments%2fBARDIN+2019+Report.pdf&disp osition=inline&name=Barbados+Drug+Information+Network+-+An+Analysis+of+the+2019+Data
- National Institute on Drug Abuse (2018). *Comorbidity: Substance use disorders and other mental illnesses.* Retrieved from: https://www.drugabuse.gov/publications/drugfacts/comorbiditysubstance-use-disorders-other-mental-illnesses
- Nyashanu, T., & Visser, M. (2022). Treatment barriers among young adults living with a substance use disorder in Tshwane, South Africa. *Substance Abuse Treatment, Prevention, and Policy*, *17*(1), 1-11.
- Organization of American States (2021). *Multilateral Evaluation Mechanism Evaluation report on drug policies: Measures of prevention, treatment and recovery support – Barbados*. Retrieved from: http://www.cicad.oas.org/mem/reports/8/Full_Eval/ENG/Barbados%20-%20MEM%20Evaluation%20Report%202021%20-%20ENG.pdf

- Pan-American Health Organization (October 30, 2020). *Barbados holds a conversation on ageing and elder affairs*. Retrieved from: https://www.paho.org/en/news/30-10-2020-barbados-holds-conversation-ageing-and-elder-affairs
- Rizzo, D., Mu, T., Cotroneo, S., & Arunogiri, S. (2022). Barriers to accessing addiction treatment for women at risk of homelessness. *Frontiers in Global Women's Health*, 5.
- Spencer, N., & Strobl, E. (2020). The impact of decriminalization on marijuana and alcohol consumption in Jamaica. *Health Policy and Planning*, *35*(2), 180-185.
- Taylor, O. D. (2010). Barriers to treatment for women with substance use disorders. *Journal of Human Behavior in the Social Environment, 20*(3), 393-409.
- United Nations (2020). *Good health and well-being: Why it matters.* Retrieved from: https://www.un.org/sustainabledevelopment/wp-content/uploads/2017/03/3_Why-It-Matters-2020.pdf
- U.S. Department of State. (n.d.). *Visa denials.* Retrieved from: https://travel.state.gov/content/travel/en/us-visas/visa-information-resources/visadenials.html
- Wen, H., Hockenberry, J. M., & Cummings, J. R. (2015). The effect of medical marijuana laws on adolescent and adult use of marijuana, alcohol, and other substances. *Journal of Health Economics*, *42*, 64-80.