



KEY POINTS

- Compared to other illicit drug markets in Australia, substances within the 'other drugs' category are niche markets. They are diverse and dynamic and include a range of drugs which merit ongoing monitoring in order to identify new trends, as well as emerging areas of potential harm.
- In 2020–21, the tryptamines, anaesthetics and anabolic steroids and other selected hormones market showed signs of potential expansion.





OTHER DRUGS

Other drugs and substances—collectively referred to in this report as 'other drugs'—are recognised as part of Australia's illicit drug market. This chapter focuses on the main drugs and substances in this category:

- anabolic agents and selected hormones
- anaesthetics
- new psychoactive substances (NPS)⁵⁰
- pharmaceuticals
- tryptamines
- other drugs not elsewhere classified (NEC).

ANABOLIC AGENTS AND OTHER SELECTED HORMONES

MAIN FORMS

The Australian Standard Classification of Drugs of Concern distinguishes 4 classes of substances as anabolic agents and selected hormones: anabolic-androgenic steroids (AAS); beta-2 agonists; peptide hormones, mimetics and analogues; and other anabolic agents and selected hormones. More generally, this group of substances is referred to as performance and image enhancing drugs (PIEDs; ABS 2011).

AAS, commonly referred to as steroids, are derivatives of testosterone—a naturally occurring male sex hormone.

- Anabolic refers to the muscle-building effects of the drug, while androgenic refers to their masculinising effects.
- AAS are most commonly administered orally (as liquid or tablets), injected intramuscularly, absorbed using suppositories or cream, gel or patches on the skin, or via nasal sprays (ADF 2022a).

Beta-2 agonists induce both anabolic and catabolic (body fat reduction) effects.

- A common beta-2 agonist misused in Australia is clenbuterol.
- Beta-2 agonists are usually sold in tablet form (ADF 2022a; DEA 2017).

Although AAS remain the most prevalent substance in the PIEDs category, a number of other substances manipulate or interfere with the body's hormonal system. Key substances in this category include erythropoietin (EPO), human growth hormone (hGH) and human chorionic gonadotrophin (hCG; ADF 2022b; Larance et al. 2005).

88

⁵⁰ NPS have been referred to as drug analogues and new psychoactive substances (DANPS) in previous Illicit Drug Data Reports.

INTERNATIONAL TRENDS

Established in 2008, Operation Pangea is an international collaboration coordinated by the International Criminal Police Organisation (INTERPOL) in a global effort to target the trafficking of counterfeit medicines (including anabolic steroids). Operation Pangea XIV was conducted in 2021 and involved 92 countries worldwide. A primary goal of this operation was to respond to increased levels of criminal involvement in these markets following the high demand for medical products and equipment driven by the COVID-19 pandemic. Operation Pangea XIV resulted in 277 arrests and USD 23 million in potentially dangerous pharmaceuticals seized (including anabolic steroids; INTERPOL 2021).

According to current and historical data provided for the World Drug Report (WDR), over the past decade the weight (in kilogram equivalent) of steroids seized globally has increased 748%, from 214.5 kilograms in 2010 to 1,818.7 kilograms in 2019. This is a 28% increase from 2018, when 1,423 kilograms was seized (UNODC 2022a).

According to the World Customs Organization (WCO), the number of 'metabolic agents'⁵¹ seizures increased in 2021, while the number of pieces of metabolic agents within those seizures decreased slightly. Metabolic agents were the most common medical product seized globally in 2021, followed by musculo-skeletal agents (WCO 2022).

DOMESTIC TRENDS

AUSTRALIAN BORDER SITUATION

The number of PIED detections at the Australian border increased 1%, from 8,726 in 2011–12 to 8,855 in 2020–21. The number of detections increased 58% this reporting period from 5,614 in 2019–20 (see Figure 24).⁵²





51 Metabolic agents include medical products such as steroids and antidiabetics.

52 The Department of Home Affairs is unable to provide statistical data on the weight of drugs in this category due to differences in drug form, which includes liquid, vials and tablets.

89

While steroid detections remain the greatest proportion of the number of PIED detections at the Australian border, the proportion decreased, from 70% in 2011–12 to 66% in 2020–21 (see Figure 25).

- The number of steroid detections increased 64% this reporting period, from 3,584 in 2019–20 to 5,861 in 2020–21.
- The number of hormone detections increased 47% this reporting period, from 2,030 in 2019–20 to 2,994 in 2020–21.
- The number of clenbuterol detections increased 149% this reporting period, from 152 in 2019–20 to 378 in 2020–21.

FIGURE 25: Number of performance and image enhancing drug detections, by category, at the Australian border 2011–12 to 2020–21 (Source: Department of Home Affairs)



Steroids Hormones

IMPORTATION METHODS

In 2020–21, detections of PIEDs at the Australian border occurred in the air cargo, air passenger/crew, international mail and sea cargo streams. International mail accounted for 73% of the number of PIED detections in 2020–21, followed by air cargo (27%), air passenger/crew (<1%) and sea cargo (<1%).

In 2020–21, detections of clenbuterol at the Australian border occurred in the air cargo, air passenger/ crew and international mail streams. International mail accounted for 93% of the number of clenbuterol detections in 2020–21, followed by air cargo (7%) and air passenger/crew (<1%).

EMBARKATION POINTS

In 2020–21, 52 countries were identified as embarkation points for PIEDs detected at the Australian border, compared with 50 countries in 2019–20. By number, China (including Hong Kong) was the primary embarkation point for PIED detections in 2020–21. Other key embarkation points this reporting period include the United States, the Netherlands, Singapore, the United Kingdom, Turkiye, France, India, Saudi Arabia and Germany.

In 2020–21, 24 countries were identified as embarkation points for clenbuterol detected at the Australian border, compared with 26 countries in 2019–20.

OTHER DRUGS

DOMESTIC MARKET INDICATORS

According to National Drug Strategy Household Survey (NDSHS) data:

- The proportion of the Australian population aged 14 years or older reporting the non-medical use of steroids at least once in their lifetime increased, from <1% in 2010 to 1% in 2016 and 2019.</p>
- The proportion of the Australian population aged 14 years or older who reported having recently⁵³ used steroids for non-medical purposes remained stable over the last decade at <1% (AIHW 2020).</p>

The below data reflect drug use within sentinel groups, which provide valuable insight into patterns of drug use and market trends and can assist in the identification of emerging issues that require further monitoring.

According to Illicit Drug Reporting System (IDRS) data, the reported recent use⁵⁴ of non-prescribed steroids has remained consistently low since monitoring commenced in 2010, ranging between less than 1% and 3%, with less than 5 participants reporting recent use in 2021 (Sutherland et al. 2021a).

According to the Australian Needle and Syringe Program Survey (ANSPS), the proportion of respondents reporting PIEDs as the drug last injected increased, from 5% in 2011 to 6% in 2020. This proportion was 4% in 2019 (Heard et al. 2020; Heard et al. 2021).

PRICE

National law enforcement data on the price of PIEDs is limited. The price range for a single 10 millilitre vial of testosterone enanthate decreased over the last decade, ranging from between \$100 and \$230 in 2011–12 (reported in Queensland and Tasmania) to between \$80 and \$100 in 2020–21 (reported in Queensland and the Northern Territory). The price was \$80 in 2019–20 (reported in Queensland). The price range for 10 x 10 millilitre vials of testosterone enanthate decreased over the last decade, from \$1,900 in 2011–12 (reported in Queensland) to between \$840 and \$1,000 in 2020–21 (reported in Queensland) and the Australian Capital Territory). The price was \$840 in 2019–20 (reported in Queensland).

Queensland was the only jurisdiction to provide price data for trenbolone acetate in 2011–12, 2019–20 and 2020–21. The price for a single 10 millilitre vial of trenbolone acetate decreased over the last decade, from \$200 in 2011–12 to \$80 in 2019–20 and 2020–21. The price for 10 x 10 millilitre vials of trenbolone acetate decreased over the last decade, from \$1,400 in 2011–12 to \$650 in 2019–20 and 2020–21.

Queensland provided price data for several other types and quantities of PIEDs this reporting period—see the *Statistics* chapter.

SEIZURES

The number of national steroid seizures increased 62%, from 208 in 2011–12 to 336 in 2020–21. The number of steroid seizures increased to a record number in 2014–15 before decreasing in subsequent reporting periods. This reporting period the number of seizures decreased 9%, from 369 in 2019–20.

⁵³ In the NDSHS, recent use refers to reported use in the previous 12 months preceding the survey.

⁵⁴ In both the Illicit Drug Reporting System (IDRS) and Ecstasy and Related Drugs Reporting System (EDRS), recent use refers to reported use in the 6 months preceding interview.

The weight of steroids seized nationally increased 1,372%, from 33.7 kilograms in 2011–12 to a record 496.8 kilograms in 2020–21. The weight of steroids seized nationally increased 2,161% this reporting period, from 21.9 kilograms in 2019–20 (see Figure 26).



FIGURE 26: National steroid seizures, by number and weight, 2011–12 to 2020–21

Victoria reported the greatest percentage increase in the number of steroid seizures in 2020–21, while South Australia reported the greatest percentage increase in the weight of steroids seized. This reporting period New South Wales continued to account for the greatest proportion of both the number (58%) and weight (96%) of steroids seized nationally (see Table 15).

TABLE 15: Number, weight and percentage change of national steroid seizures, 2019–	-20 and 2020–21
--	-----------------

Chata /Tauvitau a	Number			Weight (grams)		
State/ lerritory	2019–20	2020–21	% change	2019–20	2020–21	% change
New South Wales	188	195	3.7	14,024	477,241	3,303.0
Victoria	2	8	300.0	101	123	21.8
Queensland	52	65	25.0	4,899	506	-89.7
South Australia	1	2	100.0	2	16,520	825,900.0
Western Australia	52	31	-40.4	1,646	1,897	15.2
Tasmania	0	1	-	0	60	-
Northern Territory	12	8	-33.3	191	289	51.3
Australian Capital Territory	62	26	-58.1	1,114	177	-84.1
Total	369	336	-8.9	21,977	496,813	2,160.6

a. Includes seizures by state and territory police and Australian Federal Police for which a valid seizure weight was recorded.

93



The number of national steroid arrests increased 158%, from 511 in 2011–12 to a record 1,320 in 2020–21. The number of steroid arrests increased 14% this reporting period, from 1,160 in 2019–20. Consumer arrests continue to account for the greatest proportion of arrests, accounting for 82% of national steroid arrests in 2020–21 (see Figure 27).





While starting from a low base, the Northern Territory reported the greatest percentage increase in the number of steroid arrests in 2020–21. Queensland continued to account for the greatest proportion of national steroid arrests this reporting period (47%; see Table 16).

	Arrests						
State/Territory ^a	2019–20	2020–21	% change				
New South Wales	187	208	11.2				
Victoria	164	215	31.1				
Queensland	596	622	4.4				
South Australia	11	22	100.0				
Western Australia	184	228	23.9				
Tasmania	7	10	42.9				
Northern Territory	5	12	140.0				
Australian Capital Territory	6	3	-50.0				
Total	1,160	1,320	13.8				

TABLE 16: Number and	percentage	change of nationa	al steroid arrests	. 2019–20 and 2020–21
	percentage	change of hation		, 2013 20 0110 2020 21

a. The arrest data for each state and territory include Australian Federal Police data.

TRYPTAMINES

MAIN FORMS

Tryptamines are hallucinogenic substances which act upon the central nervous system, producing altered states of perception, sensation, cognition and consciousness, often accompanied by visual or auditory hallucinations. Some are found naturally in a variety of flowering plants, leaves, seeds and some spore-forming plants, while others are synthetically produced. The following section covers lysergic acid diethylamide (LSD) and psilocybin-containing mushrooms, the 2 most common tryptamines used in Australia (ADF 2022c; EMCDDA 2022a; EMCDDA 2022b; UNODC 2016).

LYSERGIC ACID DIETHYLAMIDE (LSD)

LSD, commonly referred to as 'acid', is a semi-synthetic hallucinogen derived from lysergic acid, a chemical found in a fungus which grows on certain types of grain.

- In pure form, LSD is a white, water-soluble and odourless powder.
- LSD is most commonly consumed orally, ingested on LSD-impregnated paper blotters (tabs⁵⁵), miniature tablets (microdots) or gelatine sheets (window panes).
- In liquid form, LSD can be administered by intravenous or intramuscular injection, or through consumption of LSD-impregnated sugar cubes (ADF 2022c; EMCDDA 2022b; UNODC 2016).

PSILOCYBIN-CONTAINING MUSHROOMS

Psilocybin is the primary psychoactive and hallucinogenic chemical present in certain species of mushroom within the *Psilocybe* genus, commonly referred to as 'magic mushrooms'.

- Approximately 20 species of psilocybin-containing mushrooms are found in Australia. In addition to variation in the psilocybin content across species of mushroom, their potency is affected by their origin, growing conditions, harvest period and form.
- Hallucinogenic mushrooms are consumed as fresh fungi, preserved (dried, cooked and/or frozen) or as dry powders or capsules. These forms can be consumed orally (raw, cooked or brewed into a beverage), smoked or injected intravenously (EMCDDA 2022a; UNODC 2016).

INTERNATIONAL TRENDS

According to the World Drug Report, less than one tonne of tryptamines and one tonne of hallucinogens were seized globally in 2019. While most of the seized hallucinogens were LSD in past years, psilocybin and dimethyltryptamine (DMT) accounted for a majority of the weight of hallucinogens seized in 2019. In 2019, Canada had most of the seized psilocybin by weight, followed by Australia. By weight, most DMT was seized in the Netherlands, followed by Canada and Ireland; and by weight, most LSD was seized in India, followed by Venezuela and Australia (UNODC 2021).

W OTHER DRUGS

DOMESTIC TRENDS

AUSTRALIAN BORDER SITUATION

The number of tryptamine detections at the Australian border increased 1,382%, from 142 in 2011–12 to a record 2,104 in 2020–21. The number of detections increased 47% this reporting period, from 1,436 in 2019–20 (see Figure 28).

FIGURE 28: Number of tryptamine detections at the Australian border 2011–12 to 2020–21 (Source: Department of Home Affairs)



Similar to 2019–20, the majority of tryptamine detections at the Australian border in 2020–21 were LSD.

- LSD accounted for 19% of the number of tryptamine detections in 2011–12, increasing to 52% in 2020–21; while psilocybin accounted for 81% of the number of tryptamine detections in 2011–12, decreasing to 42% in 2020–21. 'Other tryptamines' increased from zero detections in 2011–12 to 6% of tryptamine detections in 2020–21.
- Of the 2,104 tryptamine detections in 2020–21, 1,096 were LSD (the highest number on record), a 10% increase from 996 detections in 2019–20. Over the last decade the number of LSD detections increased 3,959%, from 27 in 2011–12.
- Of the 2,104 tryptamine detections in 2020–21, 877 were psilocybin (the highest number on record), a 131% increase from 380 detections in 2019–20. Over the last decade, the number of psilocybin detections increased 663%, from 115 in 2011–12.
- The remaining 131 tryptamine detections in 2020–21 were reported as 'other', a 118% increase from 60 detections in 2019–20. Over the last decade the number of other tryptamine detections increased from zero in 2011–12.

IMPORTATION METHODS

In 2020–21, detections of tryptamines occurred in the air cargo and international mail streams. By number, international mail accounted for the greatest proportion of tryptamines detection (99%), followed by air cargo (1%).

In 2020–21, detections of LSD occurred in the air cargo and international mail streams. By number, international mail accounted for the greatest proportion of tryptamines detection (99%), followed by air cargo (1%).

In 2020–21, detections of psilocybin occurred in the international mail stream only.

EMBARKATION POINTS

By number, the United States was the primary embarkation point for tryptamine detections at the Australian border in 2020–21. Other key embarkation points this reporting period include the Netherlands, Switzerland, France, Mexico, China (including Hong Kong), Lithuania, Canada, Germany and Peru.

By number, the Netherlands was the primary embarkation point for psilocybin detections at the Australian border in 2020–21. Other key embarkation points by number this reporting period include Switzerland, France, the United States, Lithuania, Canada, the United Kingdom, Austria, Belgium and Bulgaria.

DOMESTIC MARKET INDICATORS

According to NDSHS data:

- The proportion of the Australian population aged 14 years or older who reported having used hallucinogens at least once in their lifetime increased, from 9% in 2010 to 10% in 2019. In 2016 this proportion was 9%.
- The proportion of the Australian population aged 14 years or older who reported having recently used hallucinogens increased, from 1% in 2010 to 2% in 2019. In 2016 this proportion was 1% (AIHW 2020).

According to EDRS data:

- The proportion of respondents reporting recent LSD use increased, from 34% in 2012 to 53% in 2021. In 2020 this proportion was 49%.
- The reported median number of days of LSD use in the 6 months preceding interview remained stable at 3 days over the last decade, with the exception of 2014 and 2015 where the median number of days of use was 2.
- The proportion of respondents reporting the recent use of hallucinogenic mushrooms increased, from 27% in 2012 to 45% in 2021. In 2020 this proportion was 30%.
- The proportion of respondents reporting the recent use of DMT increased, from 13% in 2012 to 18% in 2021. In 2020 this proportion was 13%.
- The reported median number of days of DMT use in the 6 months preceding interview remained relatively stable, increasing from 1.5 days in 2012 to 2 days in 2021. The number of days remained unchanged from 2020 (Sutherland et al. 2021b).

96

PRICE

Nationally, the price range per tab of LSD remained relatively stable, ranging from between \$20 and \$50 in 2011–12 to between \$20 and \$40 in 2020–21. The price reported in 2019–20 ranged from \$15 to \$35. The median price per tab of LSD remained relatively stable, decreasing slightly from \$27.50 in 2011–12 (reported in Queensland, Tasmania and the Northern Territory) to \$25 in 2020–21. The national median price was \$27.50 in 2019–20.

AVAILABILITY

A national study of people who regularly use ecstasy and other stimulants reported that over the last decade the proportion of respondents reporting LSD as 'easy' or 'very easy' to obtain increased, from 63% in 2012 to 69% in 2021. This proportion was 61% in 2020 (Sutherland et al. 2021b).

SEIZURES

The number of national hallucinogen seizures increased 274%, from 285 in 2011–12 to a record 1,066 in 2020–21. This reporting period the number of national hallucinogen seizures increased 63% from 652 in 2019–20.

The weight of hallucinogens seized nationally increased 634%, from 23.5 kilograms in 2011–12 to a record 172.8 kilograms in 2020–21. This reporting period the weight of hallucinogens seized nationally increased 233%, from 51.8 kilograms in 2019–20 (see Figure 29).



FIGURE 29: National hallucinogen seizures, by number and weight, 2011–12 to 2020–21

Although starting from a small base, South Australia reported the greatest percentage increase in both the number and weight of hallucinogens seized in 2020–21. This reporting period New South Wales accounted for the greatest proportion of both the number (61%) and weight (73%) of hallucinogens seized nationally (see Table 17).

TABLE 17: Number,	weight and percentage	change of nationa	I hallucinogen seizur	es 2019–20 and
2020–21				

Ctata /Tauritan 2		Number		Weight (grams)		
State/ lerritory*	2019–20	2020–21	% change	2019–20	2020–21	% change
New South Wales	342	649	89.8	6,919	125,389	1,712.2
Victoria	101	81	-19.8	29,064	21,428	-26.3
Queensland	60	85	41.7	6,171	7,329	18.8
South Australia	6	16	166.7	12	1,545	12,775.0
Western Australia	109	190	74.3	8,625	16,064	86.2
Tasmania	15	24	60.0	1,085	1,044	-3.8
Northern Territory	10	15	50.0	3	11	266.7
Australian Capital Territory	9	6	-33.3	13	4	-69.2
Total	652	1,066	63.5	51,892	172,814	233.0

a. Includes seizures by state and territory police and Australian Federal Police for which a valid seizure weight was recorded.

ARRESTS

The number of national hallucinogen arrests increased 164%, from 484 in 2011–12 to a record 1,278 in 2020–21. The number of national hallucinogen arrests increased 13% this reporting period, from 1,135 in 2019–20. Consumer arrests accounted for the greatest proportion of arrests, accounting for 82% of national hallucinogen arrests in 2020–21 (see Figure 30).

FIGURE 30: Number of national hallucinogen arrests, 2011–12 to 2020–21



While starting from a low base, the Northern Territory reported the greatest percentage increase in the number of hallucinogen arrests in 2020–21. Queensland continued to account for the greatest proportion of national hallucinogens arrest this reporting period (41%; see Table 18).

State /Tausitau /	Arrests							
State/Territory*	2019–20	2020–21	% change					
New South Wales	189	168	-11.1					
Victoria	202	235	16.3					
Queensland	483	520	7.7					
South Australia	19	66	247.4					
Western Australia	221	264	19.5					
Tasmania	8	9	12.5					
Northern Territory	4	14	250.0					
Australian Capital Territory	9	2	-77.8					
Total	1,135	1,278	12.6					

TABLE 18: Number and percentage change of national hallucinogen arrests, 2019–20 to 2020–21

a. The arrest data for each state and territory include Australian Federal Police data.

ANAESTHETICS

MAIN FORMS

While anaesthetics and their precursors have many legitimate uses in the medical, veterinary, plastics and chemical industries, they are also diverted for illicit use. This section covers ketamine and gamma-hydroxybutyrate (GHB) and related substances, the most prevalent anaesthetics used illicitly in Australia (ADF 2022d).

KETAMINE

Ketamine is a central nervous system depressant used as an anaesthetic and analgesic in medical and veterinary settings.

- Ketamine is commonly found in 3 forms—liquid, powder and tablet.
- It is most commonly snorted, swallowed or injected. It can also be combined with other substances, such as cannabis or tobacco, and smoked (ADF 2022d; DrugWise 2022a; UNODC 2016).

GAMMA-HYDROXYBUTYRATE (GHB) AND RELATED SUBSTANCES

GHB is a naturally occurring substance found in the central nervous system and may also be synthetically produced.

- GHB is commonly consumed as a water-soluble salt and appears as a colourless and odourless liquid solution usually sold in small bottles or vials.
- Gamma-butyrolactone (GBL) and 1,4-butanediol (1,4-BD) are analogues and precursors of GHB which, upon ingestion, metabolise into GHB in the body, producing identical effects (ADF 2022e; DrugWise 2022b; UNODC 2016).

INTERNATIONAL TRENDS

Between 2015 and 2019, the weight of ketamine seized globally decreased by almost 50% to 12 tonnes. The majority of the weight of seized ketamine continued to be seized in East and South-East Asia, particularly in China, followed by Malaysia and Thailand. In 2019, GHB was the most seized substance within the 'sedatives and tranquilizers' category. The majority of the weight of GHB seized globally was reported in Sweden, followed by the United States and New Zealand (UNODC 2021).

According to the WCO, the weight of ketamine and phencyclidine-type substances within the 'NPS' category increased 289% in 2021. The weight of ketamine and phencyclidine-type substances accounted for 19% of the total NPS weight seized globally in 2021 and was the third most seized substance by weight (WCO 2022).

The WCO reported a 155% increase in the weight of GBL seized globally, increasing from 1,727 kilograms in 2020 to 4,394 kilograms in 2021. GBL was the fourth most seized substance by weight within the 'psychotropic substances' category in 2021. WCO data for the number of GBL seizures was not available in 2021. WCO data for GHB seizures was also not available for that year (WCO 2022).

DOMESTIC TRENDS

AUSTRALIAN BORDER SITUATION

The number of detections of anaesthetics (including GHB, GBL and ketamine) at the Australian border increased 1,233%, from 106 in 2011–12 to a record 1,413 in 2020–21. The number of anaesthetics detections increased 31% this reporting period, from 1,079 in 2019–20 (see Figure 31).





Similar to 2019–20, a majority of anaesthetic detections at the Australian border in 2020–21 were ketamine.

- Ketamine accounted for 56% of the number of anaesthetic detections in 2011–12, increasing to 69% in 2020–21; while GBL accounted for 44% in 2011–12, decreasing to 14% in 2020–21. GHB detections increased from zero detections in 2011–12 to 3% of the anaesthetics detections in 2020–21.
- Of the 1,413 anaesthetic detections, 976 were ketamine (the highest number on record), a 7% increase from the 911 detections in 2019–20. Over the last decade, the number of ketamine detections increased 1,554%, from 59 in 2011–12.
- Of the 1,413 anaesthetic detections, 194 were GBL, a 40% increase from the 139 detections in 2019–20. Over the last decade, the number of GBL detections increased 313%, from 47 in 2011–12.
- Of the 1,413 anaesthetic detections, 44 were GHB, a 52% increase from the 29 detections in 2019–20. Over the last decade, the number of GHB detections increased, from zero detections in 2011–12.

IMPORTATION METHODS

In 2020–21, detections of anaesthetics occurred in the air cargo, international mail and sea cargo streams. By number, international mail accounted for the greatest proportion of anaesthetic detections (74%), followed by air cargo (25%) and sea cargo (1%).

- Detections of ketamine occurred in the air cargo and international mail streams. By number, international mail accounted for the greatest proportion of ketamine detections (90%), followed by air cargo (10%).
- Detections of GHB occurred in the air cargo and international mail streams. By number, international mail accounted for the greatest proportion of GHB detections (98%), followed by air cargo (2%).
- Detections of GBL occurred in the air cargo, international mail and sea cargo streams. By number, international mail accounted for the greatest proportion of GBL detections (61%), followed by air cargo (36%) and sea cargo (3%).

EMBARKATION POINTS

By number, China (including Hong Kong) was the primary embarkation point for anaesthetic detections at the Australian border in 2020–21. Other key embarkation points by number this reporting period include the United Kingdom, the Republic of Korea, the Netherlands, Germany, Belgium, Spain, France, Italy and Kenya.

By number, the United Kingdom was the primary embarkation point for ketamine detections at the Australian border in 2020–21. Other key embarkation points this reporting period include Germany, France, Spain, Italy, Belgium, Kenya, the Netherlands, Poland and Pakistan.

By number, China (including Hong Kong) was the primary embarkation point for GHB and GBL detections at the Australian border in 2020–21. Other key embarkation points this reporting period include the Netherlands, the United Kingdom, Belgium, the United States, the Republic of Korea, India, Thailand, Norway and Namibia.

DOMESTIC MARKET INDICATORS

According to NDSHS data:

- The proportion of the Australian population aged 14 years or older who reported having used GHB at least once in their lifetime remained stable at 1% over the last decade.
- The proportion of the Australian population aged 14 years or older who reported having recently used GHB remained stable at <1% over the last decade.</p>
- The proportion of the Australian population aged 14 years or older who reported having used ketamine at least once in their lifetime increased, from 1% in 2010 to 3% in 2019. In 2016 this proportion was 2%.
- The proportion of the Australian population aged 14 years or older who reported having recently used ketamine increased, from <1% in 2010 to 1% in 2019. In 2016 this proportion was <1% (AIHW 2020).</p>

The National Wastewater Drug Monitoring Program (NWDMP) began monitoring ketamine in December 2020 and the drug was included for the first time in Report 13 of the NWDMP. According to data from the NWDMP for December 2020 to August 2021:

- Ketamine consumption was higher per capita in capital city sites than regional sites.
- The population-weighted average consumption of ketamine increased in both capital city and regional sites (ACIC 2022).

According to IDRS data, the proportion of respondents reporting recent GHB/GBL/1,4-BD use remained stable at 10% in 2020 and 2021 (Sutherland et al. 2021b).

According to EDRS data:

- The proportion of respondents reporting recent GHB/GBL/1,4-BD use increased, from 7% in 2012 to 9% in 2021. In 2020 this proportion was 6%.
- The reported median number of days of GHB/GBL/1,4-BD use remained stable at 2 days in 2012 and 2021. The reported number of days remained unchanged from 2020.
- The proportion of respondents reporting recent ketamine use increased, from 14% in 2012 to 52% in 2021. In 2020 this proportion was 43%.
- The reported median number of days of ketamine use increased, from 2 days in 2012 to 3 days in 2021. The reported number of days remained unchanged from 2020 (Sindicich & Burns 2013; Sutherland et al. 2021b).

CLANDESTINE LABORATORIES

Over the last decade, the proportion of clandestine laboratories detected nationally manufacturing GHB/GBL increased from one percent in 2011–12 to 6% in 2020–21. In 2019–20 the proportion was 7%. The number of laboratories detected nationally manufacturing GHB/GBL increased 183% over the last decade, from 6 in 2011–12 to 17 in 2020–21. This number decreased 26% this reporting period, from a record 23 in 2019–20 (see *Clandestine Laboratories and Precursors* chapter).

PRICE

The price range for one gram of ketamine powder decreased, from between \$50 and \$200 in 2011–12 to between \$180 and \$260 in 2020–21. The price reported in 2019–20 ranged from \$180 to \$260. The median price increased, from \$145 in 2011–12 (reported in New South Wales and Queensland) to \$245 in 2020–21. The median price was \$200 in 2019–20 (reported in New South Wales, Victoria and South Australia).

Nationally, the price range for 1–1.5 millilitres of GHB/GBL/1,4-butanediol increased, from between \$3 and \$8 in 2011–12 to between \$1 and \$20 in 2020–21. Nationally, the price reported in 2019–20 ranged from \$2 to \$10. The median price for 1–1.5 millilitres of GHB/GBL/1,4-butanediol increased, from \$6 in 2011–12 (reported in New South Wales, Queensland and South Australia) to \$10 in 2020–21. The national median price was \$6.25 in 2019–20.

The price range for one litre of GHB/GBL/1,4-butanediol decreased, ranging between \$2,000 and \$5,000 in 2011–12 to between \$1,250 and \$4,000 in 2020–21. Nationally, the price reported in 2019–20 ranged from \$900 to \$5,000. The median price for one litre of GHB/GBL/1,4-butanediol decreased, from \$3,100 in 2011–12 (reported in New South Wales, Queensland and South Australia) to \$2,413 in 2020–21 (reported in New South Wales and South Australia). The national median price was \$2,750 in 2019–20.

AVAILABILITY

In a national study of people who regularly use ecstasy and other stimulants, the proportion of respondents reporting ketamine as easy or very easy to obtain increased, from 45% in 2012 to 58% in 2021. In 2020 this proportion was 57%. Data relating to the availability of GHB/GBL was unavailable for 2021 (Sutherland et al. 2021b).

PHARMACEUTICALS

MAIN FORMS

In Australia, the importation, manufacture, distribution and supply of pharmaceuticals is controlled under legislation and regulations. Despite these controls, many pharmaceutical drugs continue to be diverted for non-medical use, including dependence, self-medication, improved performance, substitution or withdrawal from other drugs and to enhance or counter the effects of illicit drugs. Pharmaceutical drugs are obtained for non-medical purposes through a range of means, including:

- family and friends with legitimate prescriptions
- forged prescriptions
- over prescribing by health-care professionals
- online pharmacies
- theft from hospitals or pharmacies
- doctor shopping
- healthcare professionals self-prescribing or misappropriating medication (UNODC 2011).

This section focuses on benzodiazepines and opioids, the pharmaceutical drugs most commonly misused in Australia (AIHW 2017).

BENZODIAZEPINES

The term benzodiazepine covers a range of synthetic substances which act as central nervous system depressants. Benzodiazepines are most commonly found in tablet or capsule form, stamped with a brand name for oral ingestion, and may also be injected (ADF 2022f; EMCDDA 2022c; UNODC 2016).

OPIOIDS

Opioid is a generic term which covers both naturally occurring opiates extracted from the opium poppy, as well as semi or fully synthetic analogues. Most pharmaceutical opioids are produced and prescribed for pain relief (analgesics), as anaesthetics during surgery, or as therapeutic drugs to treat heroin and other opioid addictions. Common opioid-based medications in Australia include codeine, morphine, oxycodone, fentanyl, buprenorphine and tramadol, sold variously as tablets, capsules, liquid, lozenges, powder or skin patches (ADF 2022g; UNODC 2016).

INTERNATIONAL TRENDS

In 2019, benzodiazepine was the second most seized substance within the sedatives and tranquilizers category. The majority of the weight of benzodiazepines seized globally was reported in Malaysia, followed by Sweden and China. For the third time in the past 5 years, the total weight of pharmaceutical opioids seized globally (228 tonnes) exceeded the total weight of heroin seized globally (93 tonnes) in 2019. Codeine accounted for the largest proportion of the weight of pharmaceutical opioids seized in 2019, followed by tramadol, fentanyl and methadone. By weight, most pharmaceutical opioids were seized in Bangladesh (mostly codeine), followed by Benin (mostly tramadol), India (mostly codeine), Malaysia (mostly codeine) and the United States (mostly fentanyl and its analogues; UNODC 2021).

According to the World Customs Organization, the weight of 'opioids and opiates' seized decreased 29%, from 30,557.0 kilograms in 2020 to 21,590.5 kilograms in 2021. The number of opioids and opiates seizures increased 143%, from 5,992 in 2020 to 14,569 in 2021. Opioids and opiates replaced cannabis as the second most seized category by number in 2021. The United States accounted for the greatest proportion of the total number of seizures (13,092) or 90% of the weight (8,776.0 kilograms) of opioids and opiates seized globally in 2021. The global weight of opioids and opiates seized was not available in 2021 (WCO 2022).

DOMESTIC TRENDS

AUSTRALIAN BORDER SITUATION

The importation of prescription pharmaceuticals by individuals is primarily done for personal use and without criminal intent. Pharmaceuticals continue to be purchased over the internet for a variety of reasons, including the anonymity afforded to purchasers, the ability to purchase without a prescription and lower costs. However, the importation of prescription pharmaceuticals can result in a greater risk of purchasing counterfeit drugs, which either have negative or no effects, or contain a different active ingredient than expected.

104

Pharmaceutical detections reported by the Department of Home Affairs only reflect detections of benzodiazepines and opioids (including morphine, buprenorphine, methadone and oxycodone).⁵⁶ While fluctuating, the number of pharmaceuticals detected at the Australian border increased 6% from 1,337 in 2011–12 to 1,415 in 2020–21, a 27% increase from 1,112 in 2019–20 (see Figure 32).





Similar to 2019–20, the majority (64%) of pharmaceutical detections at the Australian border in 2020–21 were benzodiazepines.

- The number of benzodiazepines detections fluctuated, decreasing 31% from 1,298 in 2011–12 to 902 in 2020–21. This reporting period the number of detections increased 11% from 810 in 2019–20.
- The number of opioid detections increased 1,215%, from 39 in 2011–12 to a record 513 in 2020–21.
 This reporting period the number of detections increased 70% from 302 in 2019–20.

IMPORTATION METHODS

In 2020–21, detections of benzodiazepines at the Australian border occurred in the air cargo, air passenger/crew, international mail and sea cargo streams. By number, international mail accounted for the greatest proportion of benzodiazepine detections (79%), followed by air cargo (17%), air passenger/crew (3%) and sea cargo (1%).

In 2020–21, detections of opioids at the Australian border occurred in the air cargo, air passenger/crew, international mail and sea cargo streams. By number, international mail accounted for the greatest proportion of opioids detections (86%), followed by air cargo (12%), sea cargo (2%) and air passenger/crew (<1%).

OTHER DRUGS

⁵⁶ Benzodiazepines and opioids statistics only represent a component of the larger pharmaceutical category. As such, caution must be used when comparing data.

DOMESTIC MARKET INDICATORS

According to NDSHS⁵⁷ data:

- The proportion of the Australian population aged 14 years or older reporting the non-medical⁵⁸ use of any pharmaceuticals (excluding OTC⁵⁹) at least once in their lifetime increased, from 7% in 2010 to 12% in 2019. In 2016 this proportion was 13%.
- The proportion of the Australian population aged 14 years or older reporting recent non-medical use of any pharmaceuticals (excluding OTC) remained stable at 4% in both 2010 and 2019. In 2016 this proportion was 5% (AIHW 2020; AIHW 2011).

Since the NWDMP began in August 2016, the population-weighted average consumption of oxycodone and fentanyl has decreased in both capital city and regional sites. According to data from the NWDMP for August 2020 to August 2021:

- Fentanyl consumption was higher per capita in regional sites than capital city sites.
- The population-weighted average consumption of fentanyl decreased in both capital city and regional sites.
- Oxycodone consumption was higher per capita in regional sites than capital city sites.
- The population-weighted average consumption of oxycodone remained relatively stable in capital city sites, while the population-weighted average consumption decreased to a record low in regional sites (ACIC 2022).

According to IDRS data:

- The proportion of respondents reporting recent non-prescribed use of methadone halved, decreasing from 26% in 2012 to 13% in 2021. This proportion remained unchanged from 2020.
- The median number of days of non-prescribed methadone syrup use more than doubled, increasing from 4 days in 2012 to 10 days in 2021. In 2020 the median number of days was 5.
- The proportion of respondents reporting recent non-prescribed use of buprenorphine more than halved, decreasing from 14% in 2012 to 6% in 2021. In 2020 this proportion was 5%.
- Over the last decade, the median number of days of non-prescribed buprenorphine use remained stable at 5 days in 2012 and 2021. The median number of days was 12 in 2020.
- The proportion of respondents reporting recent non-prescribed use of morphine more than halved, decreasing from 38% in 2012 to 16% in 2021. In 2020 this proportion was 15%.
- The median number of days of non-prescribed morphine use halved, decreasing from 20 days in 2012 to 10 days in 2021. In 2020 the median number of days was 12.
- The proportion of respondents reporting recent non-prescribed use of oxycodone more than halved, decreasing from 35% in 2012 to 9% in 2021. In 2020 this proportion was 11%.
- The median number of days of non-prescribed oxycodone use decreased, from 7 days in 2012 to 4 days in 2021. The reported number of days remained unchanged from 2020.

106

⁵⁷ From 2016, the pharmaceutical data provided in the NDSHS reflects improvements made to the quality of the lifetime use and recent use dataset, with over the counter (OTC) pharmaceuticals removed. As a result, caution should be exercised in comparing data from previous reporting periods.

⁵⁸ The NDSHS relates use for non-medical purposes to the use of drugs either alone or with other drugs to induce or enhance a drug experience, for performance enhancement or cosmetic purposes.

⁵⁹ OTC refers to paracetamol, aspirin and other non-opioid over-the-counter pain-killers/analgesics.

- The proportion of respondents reporting recent non-prescribed use of fentanyl remained stable this reporting period at 6% in 2020 and 2021. Historical data for the recent use of non-prescribed fentanyl is unavailable.
- The median number of days of non-prescribed fentanyl use doubled this reporting period, increasing from 2 days in 2020 to 4 days in 2021. Historical data for median number of days of non-prescribed fentanyl use is unavailable.
- The proportion of respondents reporting recent non-prescribed use of benzodiazepines decreased, from 50% in 2012 to 29% in 2021, the lowest on record since monitoring began in 2007. In 2020 this proportion was 31%.
- The median number of days of non-prescribed benzodiazepine (excluding alprazolam) use increased, from 10 days in 2012 to 12 days in 2021. In 2020 the median number of days was 10.
- The proportion of respondents reporting recent non-prescribed use of pharmaceutical stimulants more than halved, decreasing from 13% in 2012 to 6% in 2021. In 2020 this proportion was 8%.
- The median number of days of non-prescribed pharmaceutical stimulants use decreased, from 4 days in 2012 to 3 days in 2021. The reported number of days remained unchanged from 2020 (Stafford & Burns 2013; Sutherland et al. 2021a).

According to EDRS data:

- The proportion of respondents reporting recent non-prescribed use of codeine decreased, from 14% in 2012 to 8% in 2021. In 2020 this proportion was 9%.⁶⁰
- The median number of days of non-prescribed codeine use decreased, from 4 days in 2012 to 2 days in 2021. In 2020 this proportion was 3 days.
- The proportion of respondents reporting recent non-prescribed use of pharmaceutical opioids remained stable at 10% in 2013 (when monitoring of pharmaceutical opioids began) and 2021. In 2020 this proportion was 9%.
- The median number of days of non-prescribed pharmaceutical opioids use remained low and stable this reporting period at 2 days in 2020 and 2021.
- The proportion of respondent reporting recent non-prescribed use of benzodiazepines increased, from 26% in 2012 to 35% in 2021. In 2020 this proportion was 40%.
- The median number of days of non-prescribed benzodiazepine (excluding alprazolam) use decreased, from 4 days in 2012 to 3 days in 2021. The reported number of days remained unchanged from 2020.
- The proportion of respondents reporting recent non-prescribed use of pharmaceutical stimulants increased, from 28% in 2012 to 46% in 2021. In 2020 this proportion was 39%.
- The median number of days of non-prescribed pharmaceutical stimulants use increased, from 4 days in 2012 to 5 days in 2021. The reported number of days remained unchanged from 2020 (Sindicich & Burns 2013; Sutherland et al. 2021b).

⁶⁰ In February 2018, the scheduling for codeine changed such that low-dose codeine formerly available over the counter was required to be obtained via a prescription. High-dose codeine was excluded from pharmaceutical opioids from 2018. Data from 2010 to 2020 represents non-prescribed low-dose codeine used for non-pain purposes. Data for 2021 represents non-prescribed codeine (low- and high-dose) for non-pain purposes.

According to ANSPS data:

The proportion of respondents reporting pharmaceutical opioids as the drug last injected decreased, from 15% in 2011 to 8% in 2020. This proportion was 6% in 2019 (Heard et al. 2020; Heard et al. 2021).

According to DUMA⁶¹ data:

- The proportion of detainees testing positive to benzodiazepines remained relatively stable at 20% in 2011–12 and 2020–21. In 2019–20 this proportion was 23%.⁶²
- The proportion of detainees self-reporting recent use⁶³ of benzodiazepine increased, from 13% on 2011–12 to 29% in 2020–21. In 2019–20 this proportion was 33% (see Figure 33).
- The proportion of detainees testing positive for any opiates⁶⁴ decreased, from 15% in 2011–12 to 9% in 2020–21. In 2019–20 this proportion was 10%.
- The self-reported recent use of any opiates almost doubled, increasing from 10% in 2011–12 to 18% in 2020–21. In 2019–20 this proportion was 20% (see Figure 34).

FIGURE 33: National proportion of detainees testing positive for benzodiazepines, 2011–12 to 2020–21 (Source: Australian Institute of Criminology)



a. Urine was collected in the third and fourth quarter of 2013 and the first quarter of 2014.

- b. Urine was collected in the third quarter of 2014 and the first and second quarter of 2015.
- c. Urine was collected in the third quarter of 2015 and the first and second quarter of 2016.
- d. Urine was collected in the third quarter of 2016 and the second quarter of 2017.
- e. Urine was collected in the third quarter of 2017 in Adelaide, Brisbane and Perth; the fourth quarter of 2017 in Bankstown; and the first quarter of 2018 in Adelaide, Brisbane, Perth and Surry Hills.
- f. Urine was collected in the third quarter of 2018 in Adelaide, Brisbane and Perth; the fourth quarter of 2018 in Bankstown; and the first quarter of 2019 in Adelaide, Brisbane, Perth and Surry Hills.
- g. Urine was collected in the third quarter of 2019 in Adelaide, Brisbane and Perth; the fourth quarter of 2018 in Bankstown; and the first quarter of 2020 in Adelaide, Brisbane, Perth and Surry Hills.
- h. Urine was collected in the second quarter of 2021 in Adelaide, Bankstown, Brisbane and Perth.

⁶¹ Detainees can participate in the survey without providing a urine sample. Cases with missing data are excluded from the relevant analysis.

⁶² Benzodiazepines and their metabolites can be detected in urine for 2 to 14 days after administration.

⁶³ Recent use in DUMA program refers to self-reported use in the 12 months prior to arrest.

⁶⁴ Opiates and their metabolites can be detected in urine on average 2 to 3 days after administration.

R

FIGURE 34: National proportion of detainees testing positive for any opiate compared with self-reported use of opiates other than heroin, 2011–12 to 2020–21 (Source: Australian Institute of Criminology)



a. Urine was collected in the third and fourth quarter of 2013 and the first quarter of 2014.

b. Urine was collected in the third quarter of 2014 and the first and second quarter of 2015.

c. Urine was collected in the third quarter of 2015 and the first and second quarter of 2016.

d. Urine was collected in the third quarter of 2016 and the second quarter of 2017.

e. Urine was collected in the third quarter of 2017 in Adelaide, Brisbane and Perth; the fourth quarter of 2017 in Bankstown; and the first quarter of 2018 in Adelaide, Brisbane, Perth and Surry Hills.

f. Urine was collected in the third quarter of 2018 in Adelaide, Brisbane and Perth; the fourth quarter of 2018 in Bankstown; and the first quarter of 2019 in Adelaide, Brisbane, Perth and Surry Hills.

g. Urine was collected in the third quarter of 2019 in Adelaide, Brisbane and Perth; the fourth quarter of 2018 in Bankstown; and the first quarter of 2020 in Adelaide, Brisbane, Perth and Surry Hills.

h. Urine was collected in the second quarter of 2021 in Adelaide, Bankstown, Brisbane and Perth.

PRICE

The price for a single tablet of MS Contin ranged from \$1 for one milligram, to \$60 for one 60 milligram tablet and \$100 for one 100 milligram tablet in 2020–21 (all prices reported in Tasmania). The prices remain unchanged from 2019–20. In 2011–12, the price for a single tablet of MS Contin ranged from \$1 for one milligram (reported in Tasmania), to between \$30 and \$40 for one 60 milligram tablet (reported in Queensland) and between \$60 and \$100 for one 100 milligram tablet (reported in Queensland).

The price range for a single OxyContin tablet increased, from between \$5 and \$100 in 2011–12 (reported in New South Wales, South Australia and the Australian Capital Territory) to between \$30 and \$140 in 2020–21 (reported in New South Wales and Queensland). In 2019–20, the price ranged between \$20 and \$100 (reported in New South Wales).

The price for a single 100 microgram patch of fentanyl decreased, from \$400 in 2011–12 (reported in Queensland) to between \$200 and \$300 in 2020–21 (reported in New South Wales). In 2019–20, the price ranged between \$90 and \$300 (reported in New South Wales).

SEIZURES

The number of national other opioid seizures increased 334%, from 83 in 2011–12 to 360 in 2020–21. This reporting period the number remained relatively stable, increasing 1% from 355 in 2019–20.

The weight of other opioids seized nationally increased 328%, from 26.6 kilograms in 2011–12 to 113.8 kilograms in 2020–21. This reporting period the weight decreased 47% from 214.7 kilograms in 2019–20 (see Figure 35).





Although starting from a small base, Tasmania and the Northern Territory reported the greatest percentage increase in the number of other opioid seizures in 2020–21, while Queensland reported the greatest percentage increase in the weight of other opioids seized. This reporting period New South Wales accounted for the greatest proportion of both the number (64%) and weight (76%) of other opioids seized nationally (see Table 19).

Chata /Tamitam 2	Number			Weight (grams)			
State/ lerritory*	2019–20	2020–21	% change	2019–20	2020–21	% change	
New South Wales	208	230	10.6	63,170	86,180	36.4	
Victoria	48	15	-68.8	135,493	13,064	-90.4	
Queensland	18	23	27.8	386	9,614	2,390.7	
South Australia	4	6	50.0	2,069	57	-97.2	
Western Australia	26	31	19.2	11,399	4,008	-64.8	
Tasmania	4	8	100.0	16	371	2,218.8	
Northern Territory	1	2	100.0	200	275	37.5	
Australian Capital Territory	46	45	-2.2	2,054	259	-87.4	
Total	355	360	1.4	214,787	113,828	-47.0	

TABLE 19: Number, weight and percentage change of national other opioid seizures, 2019–20 and 2020–21

a. Includes seizures by state/territory police and AFP for which a valid seizure weight was recorded.

1

NEW PSYCHOACTIVE SUBSTANCES

MAIN FORMS

NPS⁶⁵ are substances that may be structurally or functionally similar to a parent compound which is a prohibited or scheduled drug and are referred to as analogues.

- There are 3 categories of analogue drugs: direct, structural and functional.
- NPS are often marketed and sold under a range of terms including 'legal highs'⁶⁶, 'herbal highs', 'bath salts', 'designer drugs' and 'research chemicals' (UNODC 2020; UNODC 2022b; Wermuth 2006).

Among the wide range of NPS available, this section covers 3 groups of NPS in more detail: synthetic cannabinoids, cathinones, in particular 4-methylmethcathinone (4-MMC) and NBOMe compounds. These substances are controlled and border controlled drugs for the purposes of the serious drug offences in the *Criminal Code Act 1995* (Criminal Code).

SYNTHETIC CANNABINOIDS

Synthetic cannabinoids are a large and diverse group of substances which mimic the effect of delta-9-tetrahydrocannabinoil (THC)—the primary psychoactive component in cannabis.

Commonly sold as smokable herbal mixtures which have been soaked in or sprayed with the synthetic compound, synthetic cannabinoids may also come in powder, crystal or tablet form (ADF 2022h; EMCDDA 2022d; UNODC 2016).

4-MMC (4-METHYLMETHCATHINONE)

4-MMC, also known as mephedrone, is one of the most common cathinone-type substances available globally.

 Often sold as a white or brown powder, it is also available in crystal, capsule or tablet form and can be injected, smoked or swallowed (ADF 2022i).

NBOMe COMPOUNDS

There are a number of different NBOMe compounds available, with differing effects. NBOMes are potent hallucinogenic drugs, with 25I, 25B and 25C the most commonly encountered NBOMe compounds.

 NBOMes are available in various forms including blotter paper (similar to LSD), liquid, powder or tablet and can be consumed orally (buccal or sublingual), snorted or injected (ADF 2022j; UNODC 2016; EMCDDA 2014).

INTERNATIONAL TRENDS

The illicit global trade in NPS⁶⁷ is relatively small, but includes substances that are of global concern, particularly synthetic opioid NPS such as fentanyl analogues. In 2019, the total weight of NPS seized globally increased to 2,022 tonnes. While the seized weight of both synthetic NPS and plant-based NPS increased in 2019, plant-based NPS continued to account for the largest proportion of NPS seized.

⁶⁵ The term 'new' does not necessarily refer to a new invention, as many NPS may have been synthesized years or decades ago, rather it reflects their recent emergence on the market.

⁶⁶ Use of the term legal high may not reflect the true legal status of these substances under Australian legislation.

⁶⁷ The UNODC classifies NPS as substances which are not under international control whose pharmacological effects mimic substances which are internationally controlled.

The total weight of plant-based NPS seized increased more than tenfold between 2015 and 2019, with the weight of khat and kratom seized increasing to 1,623 tonnes and 398 tonnes respectively in 2019. Most of the khat seized by weight in 2019 was reported in the Near and Middle East (particularly Oman and Saudi Arabia) in contrast to most years in the past decade when most khat was seized in North America (particularly the United States) and Europe (UNODC 2021).

The weight of synthetic NPS seized globally decreased by more than 60% between 2015 and 2019, reflecting the close to 50% decrease in the weight of ketamine seized and more than 90% decrease in the weight of synthetic cannabinoids, cathinones, tryptamines and piperazines seized. However, overall the weight of synthetic NPS seized in 2019 was still 170 times larger than 2001—when the first seizures of synthetic NPS were reported in the World Drug Report. In 2019, most synthetic NPS by weight were seized in China (mainly ketamine), followed by Australia (mainly phenethylamines), Malaysia (mainly ketamine), Thailand (mainly ketamine) and Myanmar (mainly ketamine; UNODC 2021).

According to the WCO, the number of NPS seizures reported globally increased to 11,787, accounting for 16% of the total weight of drugs seized globally in 2021. The weight of NPS seized decreased 4%, from 44,864.0 kilograms in 2020 to 43,046.0 kilograms in 2021. The 'other substances' subcategory accounted for the greatest proportion of the weight of NPS seized in 2021 (33%), followed by tryptamine (31%) and ketamine and phencyclidine-type substance (19%). Lyrica (pregabalin) reported a 191% increase in 2021. The United States accounted for the greatest proportion of the number (7,589 seizures or 64%) and weight (25,397.0 kilograms) of NPS seized globally in 2021 (WCO 2022).

DOMESTIC TRENDS

AUSTRALIAN BORDER SITUATION

The number of NPS border detections increased 113% this reporting period, from 609 in 2019–20 to 1,299 in 2020–21. Historical data for NPS border detections for 2011–12 is unavailable.

In 2020–21, detections of NPS occurred in the air cargo and international mail streams. By number, international mail accounted for the greatest proportion of NPS detections (84%), followed by air cargo (16%).

DRUG PROFILING

There is a large number of NPS appearing on the Australian illicit drug market, with some only appearing sporadically. The Australian Federal Police (AFP) Forensic Drug Intelligence team, in consultation with the National Measurement Institute (NMI), has identified the following categories of NPS:

- amphetamine-type substances
- cathinone-type substances
- synthetic cannabinoids
- tryptamine-type substances
- other⁶⁸.

⁶⁸ Other NPS include 2C-group substances, synthetic opiates and ketamine analogues.

Among the many substances detected and reported since NPS profiling began in 2007–08, some have been more common than others in terms of the overall number of seizures and/or the weight of material seized (see Figure 36). The data below refers only to seizures made and examined by the AFP.

- There were no seizures of amphetamine-type substances or synthetic cannabinoids in 2020–21.
- In 2020–21, tryptamine-type substances and other NPS each accounted for 40% of the total number of analysed seizures, while cathinone-type substances made up the remaining 20%.

In contrast to previous years, amphetamine-type substances no longer constituted the greatest proportion of the weight of analysed seizures.

- In 2020–21, other NPS accounted for 92% of the weight of analysed seizures.
- Tryptamine-type substances accounted for 8% of the weight of analysed seizures in 2020–21.
- Cathinone-type substances accounted for less than 1% of the weight of analysed seizures in 2020–21.
 - The relevant seizure was of a single cathinone-type substance, 4-fluoro-3-methyl-αpyrrolidinovalerophenone (4-fluoro-3-methyl-α-PVP).

The AFP's National Forensic Rapid Laboratory (NFRL) identifies a majority of the NPS seized by the AFP through the international mail stream. NFRL was not in operation during the 2020–21 reporting period, which may impact on the number of seizures identified for analysis and the range of substances detected during this reporting period.





a. The data above refers only to seizures made and examined by the AFP and examined by AFP crime scene teams.

DOMESTIC MARKET INDICATORS

According to NDSHS data:

- The proportion of the Australian population aged 14 years or older reporting having used a new and emerging psychoactive substance at least once in their lifetime increased, from <1% in 2013 to 1% in 2016 and 2019.
- The proportion of the Australia population aged 14 years or older reporting having recently used a new and emerging psychoactive substance remained stable at <1% in 2013, 2016 and 2019.</p>
- The proportion of the Australian population aged 14 years or older reporting having used synthetic cannabinoids at least once in their lifetime increased, from 1% in 2013 to 3% in 2016 and 2019.
- The proportion of the Australia population aged 14 years or older reporting having recently used synthetic cannabinoids decreased, from 1% in 2013 to <1% in 2016 and 2019 (AIHW 2020).</p>

According to IDRS data:

- The proportion of respondents reporting recent use of NPS decreased, from 12% in 2013 (earliest available data) to 7% in 2021. In 2020 this proportion was 8%.
- The proportion of respondents reporting recent use of substances mimicking the effects of cannabis decreased, from 9% in 2013 (earliest available data) to 4% in 2021. In 2020 this proportion was 5%.
- The proportion of respondents reporting recent use of substances mimicking the effect of opioids remained stable this reporting period at 1% in 2020 and 2021 (Sutherland et al. 2021a).

According to EDRS data:

- The proportion of respondents reporting recent use of any NPS (including plant-based NPS) decreased, from 40% in 2012 to 16% in 2021. In 2020 this proportion was 15%.
- The proportion of respondents reporting recent use of any NPS (excluding plant-based NPS) decreased, from 37% in 2012 to 14% in 2021. In 2020 this proportion was 12%.
- The following trends were observed in the proportions of respondents reporting recent use of other substances within the NPS group:
 - Recent use of any 2C substance halved, decreasing from 12% in 2012 to 6% in 2021. In 2020 this proportion was 5%.
 - Recent use of NBOMes decreased, from 9% in 2014 (earliest available data) to 1% in 2021.
 This proportion remained unchanged from 2020.
 - Recent use of synthetic cannabinoids decreased, from 15% in 2012 to 2% in 2021. In 2020 this proportion was 4% (Sutherland et al. 2021b).

PRICE

National law enforcement price data for NPS was unavailable in 2020–21.

OTHER DRUGS

OTHER AND UNKNOWN NOT ELSEWHERE CLASSIFIED DRUGS

Data for national other and unknown not elsewhere classified (NEC) drug seizures and arrests capture those drugs and substances outside the specific drug categories contained in the *Illicit Drug Data Report*. This category contains a range of substances including precursors, anaesthetics, NPS, pharmaceuticals and drugs not elsewhere classified. Substances in this category are likely to change between reporting periods. Data limitations are further discussed in the *Statistics* chapter of this report.

SEIZURES

The number of national other and unknown NEC drug seizures increased 116%, from 5,399 in 2011–12 to a record 11,648 in 2020–21. This reporting period the number of seizures increased 14% from 10,260 in 2019–20.

The weight of other and unknown NEC drugs seized nationally increased 33%, from 13,451.5 kilograms in 2011–12 to 17,911.1 kilograms in 2020–21. This reporting period the weight seized increased 38 percent from 12,987.7 kilograms in 2019–20 (see Figure 37).





The Australian Capital Territory reported the greatest percentage increase in the number of other and unknown NEC drug seizures in 2020–21, while Victoria reported the greatest percentage increase in the weight seized. This reporting period New South Wales accounted for the greatest proportion of the number of other and unknown NEC drug seizures (52%), while Victoria accounted for the greatest proportion of the weight seized (60%; see Table 20).

TABLE 20: Number, weight and percentage change of national other and unknown not elsewhere classified drug seizures, 2019–20 and 2020–21

Chata / T aurithan 2	Number			ıber Weight (grams)		
State/ lerritory*	2019–20	2020–21	% change	2019–20	2020–21	% change
New South Wales	5,307	6,093	14.8	10,197,938	6,826,128	-33.1
Victoria	612	857	40.0	2,222,536	10,751,770 ^b	383.8
Queensland	1,137	986	-13.3	433,153	180,635	-58.3
South Australia	28	32	14.3	5,501	15,420	180.3
Western Australia	2,660	2,529	-4.9	94,366	98,604	4.5
Tasmania	236	575	143.6	3,036	7,035	131.7
Northern Territory	165	194	17.6	19,620	24,449	24.6
Australian Capital Territory	115	382	232.2	11,565	7,067	-38.9
Total	10,260	11,648	13.5	12,987,715	17,911,108	37.9

a. Includes seizures by state and territory police and Australian Federal Police for which a valid seizure weight was recorded.

b. Includes a single seizure of 1,4-BD weighing over 4 tonnes.

ARRESTS

The number of other and unknown NEC drug arrests increased 155%, from 10,605 in 2011–12 to 27,072 in 2020–21. The number of national other and unknown NEC drug arrests decreased 6% from a record 28,812 in 2019–20. Consumer arrests account for the greatest proportion of arrests, accounting for 86% of national other and unknown NEC drug arrests in 2020–21 (see Figure 38).





While starting from a low base, the Australian Capital Territory reported the greatest percentage increase in the number of other and unknown NEC drug arrests this reporting period. Victoria continued to account for the greatest proportion of national other and unknown NEC drug arrests in 2020–21 (39%; see Table 21).

OTHER DRUGS

State/Territory ^a	Arrests						
	2019–20	2020–21	% change				
New South Wales	4,011	3,238	-19.3				
Victoria	8,803	10,410	18.3				
Queensland	7,877	7,004	-11.1				
South Australia	1,378	1,136	-17.6				
Western Australia	6,118	4,508	-26.3				
Tasmania	558	644	15.4				
Northern Territory	49	93	89.8				
Australian Capital Territory	18	39	116.7				
Total	28,812	27,072	-6.0				

TABLE 21: Number and percentage change of national other and unknown not elsewhere classified drug arrests, 2019–20 and 2020–21

a. The arrest data for each state and territory include Australian Federal Police data.

SUMMARY

The illicit markets in Australia for substances within the 'other drugs' category are comparatively small, however they include a range of drugs which merit ongoing monitoring in order to identify new trends, as well as emerging areas of potential harm.

As a whole, the Australian markets for other drugs can be described as niche markets. In 2020–21, the markets for anabolic steroids and other selected hormones, tryptamines and anaesthetics continued to remain small but showed signs of potential expansion. Illicit pharmaceuticals remained relatively stable while NPS markets presented a mixed picture.

REFERENCES

Australian Bureau of Statistics (ABS) 2011, Australian Classification of Drugs of Concern, ABS, Canberra.

Australian Criminal Intelligence Commission (ACIC) 2022, *National Wastewater Drug Monitoring Program–Report 15*, Canberra, https://www.acic.gov.au/publications/national-wastewater-drug-monitoring-program-reports/report-15-national-wastewater-drug-monitoring-program/>.

Alcohol and Drug Foundation (ADF) 2022a, *Drug Facts, Anabolic steroids*, viewed 8 April 2022, https://adf.org.au/drug-facts/steroids/.

Alcohol and Drug Foundation (ADF) 2022b, *Drug Facts, Performance & image enhancing drugs*, viewed 8 April 2022, <https://adf.org.au/drug-facts/pieds/>.

Alcohol and Drug Foundation (ADF) 2022c, *Drug Facts, LSD*, viewed 8 April 2022, https://adf.org.au/drug-facts/lsd/.

Alcohol and Drug Foundation (ADF) 2022d, *Drug Facts, Ketamine*, viewed 8 April 2022, <https://adf.org.au/drug-facts/ketamine/>.

Alcohol and Drug Foundation (ADF) 2022e, *Drug Facts, GHB,* viewed 8 April 2022, https://adf.org.au/drug-facts/ghb/.

Alcohol and Drug Foundation (ADF) 2022f, *Drug Facts, Benzodiazepines*, viewed 8 April 2022, https://adf.org.au/drug-facts/benzodiazepines/>.

Alcohol and Drug Foundation (ADF) 2022g, *Drug Facts, Opioids*, viewed 8 April 2022, https://adf.org.au/drug-facts/opioids/.

Alcohol and Drug Foundation (ADF) 2022h, *Drug Facts, Synthetic cannabis,* viewed 8 April 2022, https://adf.org.au/drug-facts/synthetic-cannabis/.

Alcohol and Drug Foundation (ADF) 2022i, *Drug Facts, Synthetic cathinones*, viewed 8 April 2022, https://adf.org.au/drug-facts/synthetic-cathinones/>.

Alcohol and Drug Foundation (ADF) 2022j, *Drug Facts, NBOMes*, viewed 8 April 2022, https://adf.org.au/drug-facts/nbomes/.

Australian Institute of Health and Welfare (AIHW) 2020, *National Drug Strategy Household Survey 2019, Drug Statistics series no. 32*, Canberra, https://www.aihw.gov.au/reports/illicit-use-of-drugs/national-drug-strategy-household-survey-2019/contents/table-of-contents.

Australian Institute of Health and Welfare (AIHW) 2017, *Non-medical use of pharmaceuticals: trends, harms and treatment, 2006-07 to 2015-16*, Drug treatment series no.30. Cat. no. HSE 195. Canberra.

Australian Institute of Health and Welfare (AIHW) 2011, 2010 *National Drug Strategy Household Survey report, Drug Statistics series no. 25*, Canberra, https://www.aihw.gov.au/reports/illicit-use-of-drugs/2010-ndshs/contents/table-of-contents.

Drug Enforcement Administration (DEA) 2017, *Drugs of Abuse: A DEA Resource Guide*, <https://www.dea.gov/documents/2017/06/15/drugs-abuse>.

DrugWise 2022a, Ketamine, viewed 8 April 2022, <http://www.drugwise.org.uk/ketamine/>.

DrugWise 2022b, GHB/GBL, viewed 8 April 2022, <http://www.drugwise.org.uk/GHB/>.

European Monitoring Centre for Drugs and Drug Addiction (EMCDDA) 2022a, *Hallucinogenic mushrooms drug profile*, viewed 11 April 2022, <https://www.emcdda.europa.eu/publications/drug-profiles/hallucinogenic-mushrooms_en>.

European Monitoring Centre for Drugs and Drug Addiction (EMCDDA) 2022b, *Lysergide (LSD) drug profile*, viewed 11 April 2022, https://www.emcdda.europa.eu/publications/drug-profiles/lsd.

European Monitoring Centre for Drugs and Drug Addiction (EMCDDA) 2022c, *Benzodiazepines drug profile*, viewed 11 April 2022, https://www.emcdda.europa.eu/publications/drug-profiles/benzodiazepines_en. European Monitoring Centre for Drugs and Drug Addiction (EMCDDA) 2022d, *Synthetic cannabinoids drug profile*, viewed 11 April 2022, https://www.emcdda.europa.eu/publications/drug-profiles/ benzodiazepines_en. European Monitoring Centre for Drugs and Drug Addiction (EMCDDA) 2022d, *Synthetic cannabinoids drug profile*, viewed 11 April 2022, https://www.emcdda.europa.eu/publications/drug-profile, https://www.emcdda.europa.eu/publications/drug-profile, https://www.emcdda.europa.eu/publications/drug-profiles/synthetic-cannabinoids#">https://www.emcdda.europa.eu/publications/drug-profiles/synthetic-cannabinoids#">https://www.emcdda.europa.eu/publications/drug-profiles/synthetic-cannabinoids#).

European Monitoring Centre for Drugs and Drug Addiction (EMCDDA) 2014, *EMCDDA–Europol Joint Report on a new psychoactive substance: 25I-NBOMe (4-iodo-2,5-dimethoxy-N-(2-methoxybenzyl) phenethylamine)*, Joint Reports, Publications Office of the European Union, Luxembourg, <http://www.emcdda.europa.eu/system/files/publications/817/TDAS14003ENN_466654.pdf>.

Heard, S, Iversen, J, Geddes, L, & Maher, L 2020, *Australian NSP survey: Prevalence of HIV, HCV and injecting and sexual behaviour among NSP attendees, 25-year National Data Report 1995-2019,* Kirby Institute, University of New South Wales, Sydney.

118

119

Heard, S, Iversen, J & Maher, L 2021, *Australian Needle Syringe Program Survey National Data Report* 2016-2020: *Prevalence of HIV, HCV and injecting and sexual behaviour among NSP attendees,* Kirby Institute, University of New South Wales, Sydney.

International Criminal Police Organization (INTERPOL) 2021, *Pharmaceutical crime operations*, viewed 06 April 2022, https://www.interpol.int/en/Crimes/Illicit-goods/Pharmaceutical-crime-operations.

Larance, B, Degenhardt, L, Dillon, P & Copeland, J 2005, *Use of performance and image enhancing drugs among men: a review*, NDARC Technical Report No. 232, National Drug and Alcohol Research Centre, University of New South Wales, Sydney https://ndarc.med.unsw.edu.au/sites/default/files/ndarc/ resources/TR.232.pdf>.

Sindicich, N, & Burns, L 2013, *Australian Trends in Ecstasy and Related Drug Markets 2012: Findings from the Ecstasy and Related Drugs Reporting System (EDRS)*, Australian Drug Trend Series No. 100, National Drug and Alcohol Research Centre, University of New South Wales, Sydney.

Stafford, J, & Burns, L 2013, *Australian Drug Trends 2012: Findings from the Illicit Drug Reporting System (IDRS)*, Australian Drug Trend Series No. 91, National Drug and Alcohol Research Centre, University of New South Wales, Sydney.

Sutherland, R, Uporova, J, Chandrasena, U, Price, O, Karlsson, A, Gibbs, D, Swanton, R, Bruno, R, Dietze, P, Lenton, S, Salom, C, Daly, C, Thomas, N, Juckel, J, Agramunt, S, Wilson, Y, Woods, E, Moon, C, Degenhardt, L, Farrell, M & Peacock, A, 2021a, *Australian Drug Trends 2021: Key findings from the National Illicit Drug Reporting System (IDRS) interviews*, National Drug and Alcohol Research Centre, University of New South Wales, Sydney.

Sutherland, R, Karlsson, A, Price, O, Uporova, J, Chandrasena, U, Swanton, R, Gibbs, D, Bruno, R, Dietze, P, Lenton, S, Salom, C, Grigg, J, Wilson, Y, Eddy, S, Hall, C, Daly, C, Thomas, N, Juckel, J, Degenhardt, L, Farrell, M & Peacock, A, 2021b, *Australian Drug Trends 2021: Key findings from the National Ecstasy and Related Drugs Reporting System (EDRS) interviews*, National Drug and Alcohol Research Centre, University of New South Wales, Sydney.

United Nations Office on Drugs and Crime (UNODC) 2022a, Annual Drug Seizures data, viewed 28 February 2022, https://dataunodc.un.org/data/drugs/Annual%20Drug%20Seizures.

United Nations Office on Drugs and Crime (UNODC) 2022b, UNODC Early Warning Advisory (EWA) on New Psychoactive Substances (NPS), viewed 11 April 2022, https://www.unodc.org/LSS/Home/NPS.

United Nations Office on Drugs and Crime (UNODC) 2021, World Drug Report 2021, Vienna.

United Nations Office on Drugs and Crime (UNODC) 2020, *Global Synthetic Drugs Assessment 2020*, Vienna, <https://www.unodc.org/documents/scientific/Global_Synthetic_Drugs_Assessment_2020. pdf?bcsi_scan_72a8b6e8d29a8c2e=0&bcsi_scan_filename=Global_Synthetic_Drugs_Assessment_2020.pdf>.

United Nations Office on Drugs and Crime (UNODC) 2016, *Terminology and Information on Drugs*, 3rd edition, New York, United Nations.

United Nations Office on Drugs and Crime (UNODC) 2011, *The non-medical use of prescription drugs: Policy direction issues*, Discussion paper, https://www.unodc.org/documents/drug-prevention-andtreatment/nonmedical-use-prescription-drugs.pdf>.

Wermuth, C 2006, *Similarity in Drugs: Reflections on analogue design*, Drug Discovery Today, Volume 11, Issues 7-8, April 2006, pp 348-354.

World Customs Organization (WCO) 2022, Illicit Trade Report 2021, Brussels.