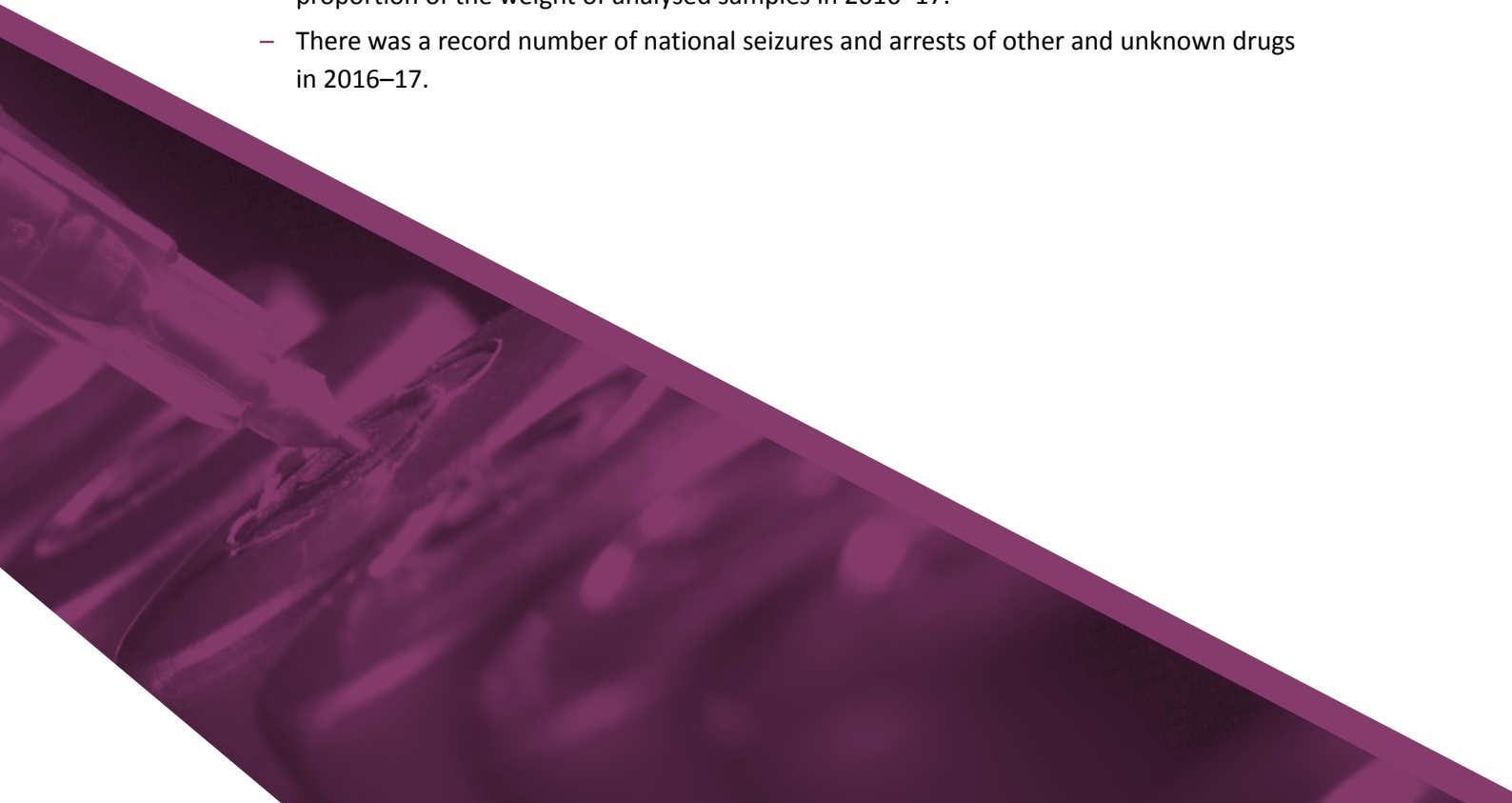


OTHER DRUGS

➤ KEY POINTS

- Many of the drugs and substances categorised as other drugs have both licit and illicit uses and may be lawfully or illegally produced. They reflect diverse and complex markets, both domestically and internationally.
- Globally the non-medical use of prescription drugs, particularly opioids, is a growing issue, with fentanyl use a significant concern.
 - Statistics in the United States indicate fatalities caused by fentanyl and other synthetic opioids exceeded heroin overdose fatalities in 2016.
 - According to the National Wastewater Drug Monitoring Program, estimated average consumption of fentanyl and oxycodone remained relatively stable between August 2016 and August 2017, with consumption of both drugs higher in regional sites than capital city sites.
- Indicators of demand and supply for other drugs in Australia provide a mixed picture.
 - In 2016–17 the number of detections of PIEDs at the Australian border decreased, although the overall number of PIED detections has remained relatively stable since 2013–14. Decreases were also reported for national steroid seizures and arrests in 2016–17.
 - There was a record number of tryptamine detections at the Australian border in 2016–17, the majority of which relate to LSD.
 - The number of national hallucinogen seizures and arrests and the weight of hallucinogens seized nationally increased to record levels in 2016–17.
 - The number of anaesthetic detections at the Australian border almost doubled this reporting period to a record 1 151 detections in 2016–17, the majority of which relate to ketamine.
 - Forensic profiling of NPS indicate cathinone-type substances accounted for the greatest proportion of the number, with amphetamine-type substances accounting for the greatest proportion of the weight of analysed samples in 2016–17.
 - There was a record number of national seizures and arrests of other and unknown drugs in 2016–17.



OTHER DRUGS

Other drugs and substances—collectively referred to in this report as ‘other drugs’—are increasingly being 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
- tryptamines
- anaesthetics
- pharmaceuticals
- new psychoactive substances (NPS)¹
- other drugs not elsewhere classified (NEC).

ANABOLIC AGENTS AND OTHER SELECTED HORMONES

MAIN FORMS

The *Australian Standard Classification of Drugs of Concern* distinguishes four 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.

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 2018a; DEA 2017a; NDS 2006a).

Although AAS remain the most prevalent substance in the PIEDs category, a number of other substances exist which 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 2018b; NDS 2006b; NDS 2006c; NDS 2006d; Larance et al. 2005).

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



INTERNATIONAL TRENDS

The worldwide trafficking and use of PIEDs is a complex, large and highly profitable market. Controls regarding their use and distribution vary internationally, with PIEDs diverted from legitimate sources, as well as being manufactured in clandestine laboratories. Distributed online, or through direct sales to users, illicit PIEDs are primarily marketed to professional and amateur athlete and body building markets, as well as to individuals seeking to improve their appearance (ADF 2018b).

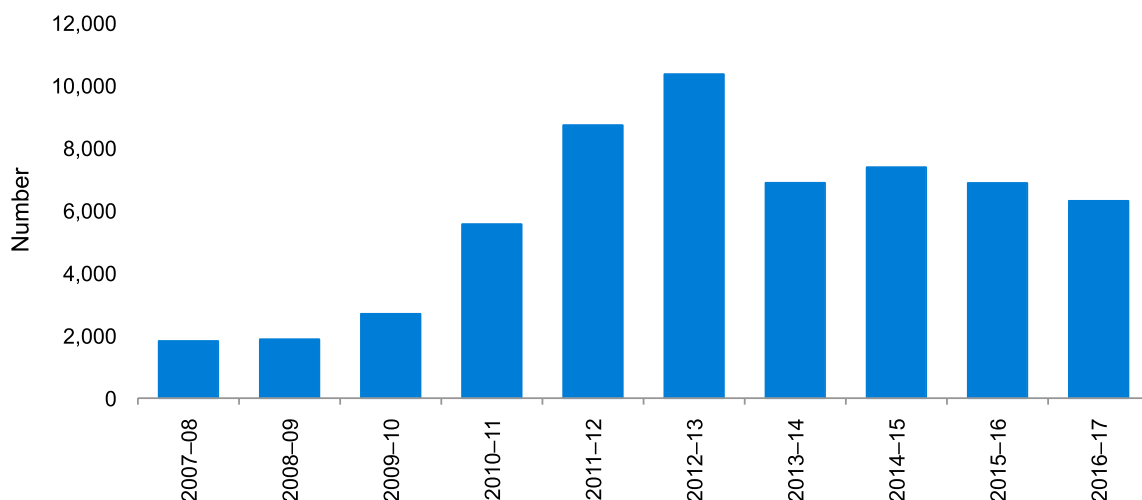
INTERPOL and the Permanent Forum on International Pharmaceutical Crime initiated Operation Pangea (Pangea) in 2008. Pangea is an international operation targeting the online advertising, sale and supply of illicit and counterfeit medicines and medical devices that pose a threat to public health and safety. Activity is conducted on an annual basis in the form of an international week of action and continues to evolve and build upon best practice. One hundred and three countries and 193 agencies participated in Pangea IX, which took place between 30 May and 7 June 2016. Pangea X took place from 12–19 September 2017, with a record 123 countries participating in the global week of action. Project Energia, an INTERPOL initiative supported by the World Anti-Doping Agency (WADA) and the School of Criminal Science at the University of Lausanne, was launched in 2016 and focuses on substances used with the exclusive aim of improving athletic performance and physical fitness. Focusing on such substances as anabolic steroids, peptides, growth hormones and EPO, Project Energia aims to assist member countries understand and combat the trafficking of PIEDs through intelligence sharing and targeted criminal analysis (RCMP 2017; INTERPOL 2017; INTERPOL 2016).

DOMESTIC TRENDS

AUSTRALIAN BORDER SITUATION

The number of PIED detections at the Australian border decreased 8.3 per cent this reporting period, from 6 877 in 2015–16 to 6 308 in 2016–17 (see Figure 24).²

FIGURE 24: Number performance and image enhancing drug detections at the Australian border, 2007–08 to 2016–17 (Source: Department of Home Affairs)

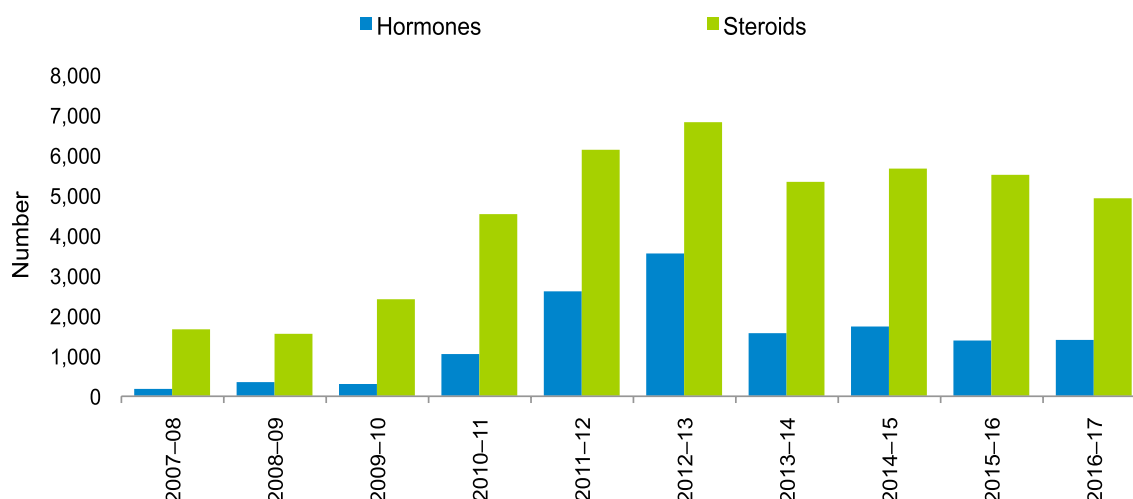


² The Department of Home Affairs is unable to provide statistical data on the weight of drugs in this category due to differences in drug form, which includes liquid, vials and tablets.

Of the 6 308 PIED detections in 2016–17, 78.0 per cent were steroids and 22.0 per cent were hormones.

- The number of steroid detections decreased 10.6 per cent this reporting period, from 5 502 in 2015–16 to 4 918 in 2016–17.
- The number of hormone detections increased 1.1 per cent this reporting period, from 1 375 in 2015–16 to 1 390 in 2016–17 (see Figure 25).

FIGURE 25: Number of performance and image enhancing drug detections, by category, at the Australian border, 2007–08 to 2016–17 (Source: Department of Home Affairs)



The number of clenbuterol detections at the Australian border decreased 22.2 per cent this reporting period, from 595 in 2015–16 to 463 in 2016–17. Of the 463 detections, 90.3 per cent were identified in the international mail stream, followed by air passenger/crew (7.6 per cent) and air cargo streams (2.2 per cent).

IMPORTATION METHODS

In 2016–17 detections of PIEDs occurred in the international mail, air cargo and air passenger/crew streams. The international mail stream accounted for 88.3 per cent of the number of PIED detections at the Australian border this reporting period, followed by air cargo (7.2 per cent) and air passenger/ crew (4.5 per cent).³

EMBARKATION POINTS

In 2016–17, 59 countries were identified as embarkation points for PIED detections at the Australian border, compared with 64 countries in 2015–16. By number, the United Kingdom (UK) was the primary embarkation point for PIED detections in 2016–17. Other key embarkation points identified this reporting period by number of detections include the United States (US), China (including Hong Kong), Thailand, India, Turkey, the Philippines, Poland and Singapore.

In 2016–17, 26 countries were identified as embarkation points for clenbuterol detections at the Australian border, compared with 28 countries in 2015–16.

³ A figure for importation methods of PIEDs detected in 2016–17 will be available on the Crime Statistics Australia website. See <<http://crimestats.aic.gov.au/>>.



DOMESTIC MARKET INDICATORS

According to the 2016 National Drug Strategy Household Survey (NDSHS), 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 0.5 per cent in 2013 to 0.6 per cent in 2016. In the same survey, the proportion reporting recent⁴ steroid use for non-medical purposes remained stable at 0.1 per cent (AIHW 2017a).

In a 2016 national study of regular injecting drug users, the proportion of respondents reporting steroid use at some stage in their lifetime increased, from 6.0 per cent in 2015 to 7.0 per cent in 2016. This figure remained stable in 2017. In the same study, the proportion of respondents reporting recent⁵ steroid use was 2.0 per cent in 2016 and remained stable in 2017 (Karlsson & Burns 2018; Stafford & Breen 2017a).

In a 2016 national study of regular ecstasy users, the proportion of respondents reporting steroid use at some stage in their lifetime decreased, from 4.0 per cent in 2015 to 3.0 per cent in 2016 and remained stable in 2017. In the same study, the proportion of respondents reporting recent steroid use remained stable at 1.0 per cent in 2016 and 2017 (Uporova et al. 2018; Stafford & Breen 2017b).

According to the Australian Needle and Syringe Program Survey (ANSPS), the prevalence of respondents reporting PIEDs as the drug last injected nationally decreased, from 6.0 per cent in 2015 to 4.0 per cent in 2016. Reported figures of specific use vary between the states and territories.

- The reported prevalence of PIEDs as the drug last injected ranged from 6.0 per cent to 14.0 per cent over the period 2012 to 2016 in Queensland and between 10.0 per cent and 12.0 per cent in New South Wales.
- The reported prevalence of injecting PIEDs remained stable at 3.0 per cent or less in all other states and territories.
- In 2016, of the respondents who recently initiated⁶ injecting drug use, one in four reported PIEDs as the drug last injected (Memedovic et al. 2017).

PRICE

National law enforcement data on the price of PIEDs is limited. Queensland and Tasmania were the only states to report prices for PIEDs in 2016–17. The price for a single 10 millilitre vial of testosterone enanthate remained stable and ranged between \$130 and \$250 in 2016–17. The price for a single 10 millilitre vial of Sustanon 250 (a blend of four testosterone compounds) ranged between \$150 and \$250 and the price for a single 10 millilitre vial of testosterone propionate ranged between \$150 and \$250. The price of a single 10 millilitre vial of Deca-durabolin (an anabolic steroid) also remained stable this reporting period, ranging between \$150 and \$250.

4 In the NDSHS, recent use refers to reported use in the 12 months preceding interview.

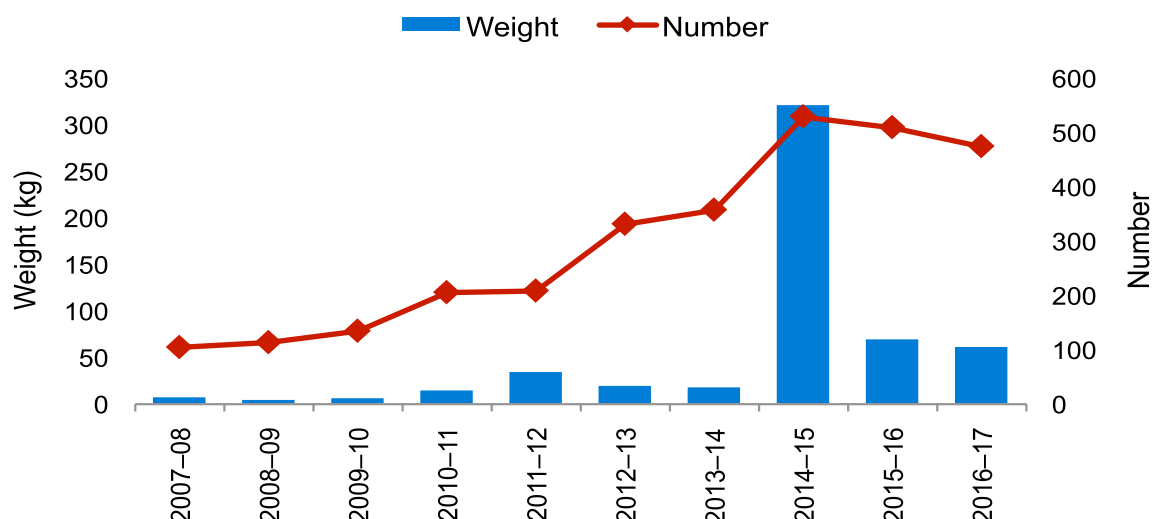
5 In both the Illicit Drug Reporting System (IDRS) and Ecstasy and Related Drugs Reporting System (EDRS), recent use refers to reported use in the six months preceding interview.

6 Less than three years since first injection.

SEIZURES AND ARRESTS

The number of national steroid seizures decreased 6.9 per cent this reporting period, from 509 in 2015–16 to 474 in 2016–17. The weight of steroids seized nationally decreased 11.9 per cent this reporting period, from 68.8 kilograms in 2015–16 to 60.6 kilograms in 2016–17 (see Figure 26).

FIGURE 26: National steroid seizures, by number and weight, 2007–08 to 2016–17



Tasmania reported the greatest percentage increase in the number and weight of steroid seizures this reporting period. New South Wales accounted for the greatest proportion of the number of national steroid seizures this reporting period (56.1 per cent), while Queensland accounted for the greatest proportion of the weight of steroids seized in 2016–17 (48.2 per cent; see Table 17).

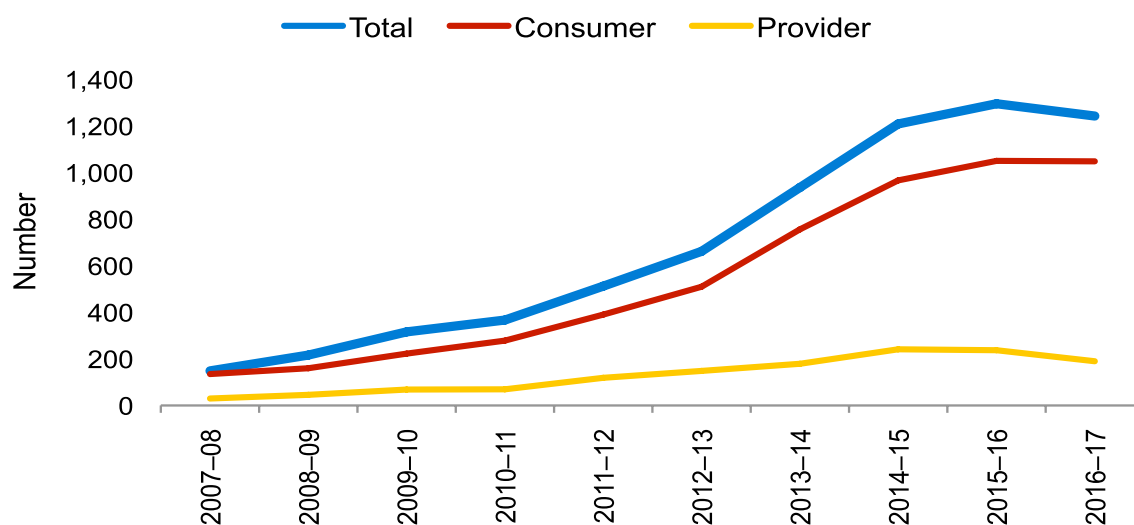
TABLE 17: Number, weight and percentage change of national steroid seizures, 2015–16 and 2016–17

State/Territory ^a	Number			Weight (grams)		
	2015–16	2016–17	% change	2015–16	2016–17	% change
New South Wales	286	266	-7.0	63 492	10 720	-83.1
Victoria	20	27	35.0	624	16 759	2 585.7
Queensland	57	63	10.5	1 072	29 210	2 624.8
South Australia	0	0	0.0	0	0	0.0
Western Australia	49	33	-32.7	1 576	1 647	4.5
Tasmania	4	6	50.0	1	163	16 200.0
Northern Territory	20	23	15.0	575	1 009	75.5
Australian Capital Territory	73	56	-23.3	1 495	1 151	-23.0
Total	509	474	-6.9	68 835	60 659	-11.9

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

The number of national steroid arrests decreased 4.1 per cent this reporting period, from 1 297 in 2015–16 to 1 244 in 2016–17. Consumer arrests continue to account for the greatest proportion of arrests, comprising 84.3 per cent of national steroid arrests in 2016–17 (see Figure 27).

FIGURE 27: Number of national steroid arrests, 2007–08 to 2016–17



The Australian Capital Territory reported the greatest percentage increase in the number of steroid arrests in 2016–17, with Queensland accounting for the greatest proportion of national steroid arrests this reporting period (55.8 per cent; see Table 18).

TABLE 18: Number and percentage change of national steroid arrests, 2015–16 and 2016–17

State/Territory ^a	Arrests		% change
	2015–16	2016–17	
New South Wales	158	164	3.8
Victoria	96	124	29.2
Queensland	705	694	-1.6
South Australia	8	3	-62.5
Western Australia	255	220	-13.7
Tasmania	22	9	-59.1
Northern Territory	50	15	-70.0
Australian Capital Territory	3	15	400.0
Total	1 297	1 244	-4.1

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 two most common tryptamines used in Australia (ADF 2018c; EMCDDA 2017a; 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 its pure form, LSD is a white, water-soluble and odourless powder.
- LSD is most commonly consumed orally, ingested on LSD-impregnated paper blotters (tabs⁷), miniature tablets (microdots) or gelatine sheets (window panes).
- In liquid form, LSD can be administered by intravenous or intramuscular injection, or impregnated in sugar cubes (ADF 2018c; 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 2017a; UNODC 2016).

INTERNATIONAL TRENDS

Relative to other illicit drug markets, the global trafficking and use of LSD and psilocybin remains low. While a small increase in the total number of psilocybin seizures was noted by World Customs Organisation (WCO) agencies between 2015 and 2016, the number of LSD seizures decreased slightly. The total weight seized for both substances has remained stable. In European Union (EU) countries, the total number of LSD seizures doubled between 2010 and 2015, reaching 1 400 seizures in 2015 (equating to approximately 100 000 dosage units), however the weight of LSD seized over the same period has fluctuated. An emerging international trend is the consumption—both deliberate and unintentional—of NPS⁸ marketed as LSD. The UNODC *World Drug Report 2017* noted that several countries had reported substances belonging to the NBOME series of compounds associated with severe intoxications and fatalities which were sold as synthetic LSD, LSD or ecstasy (EMCDDA 2017b; UNODC 2017a; WCO 2017).

DOMESTIC TRENDS

AUSTRALIAN BORDER SITUATION

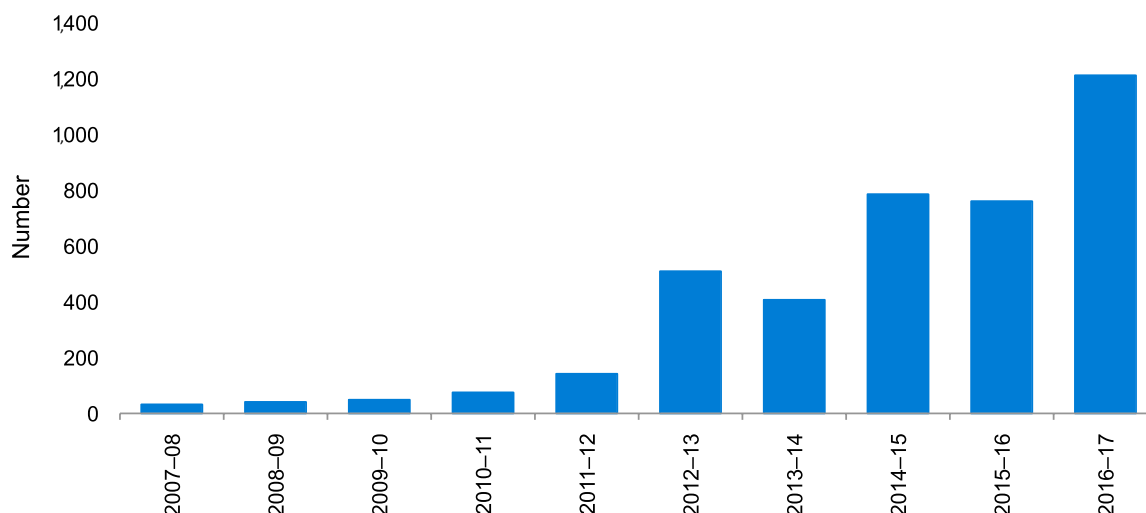
The number of tryptamines detected at the Australian border increased 59.3 per cent this reporting period, from 760 in 2015–16 to a record 1 211 in 2016–17 (see Figure 28).

- Of the 1 211 detections in 2016–17, 887 were LSD, a 112.2 per cent increase from the 418 detections reported in 2015–16.
- There were 195 detections of psilocybin this reporting period, a 2.6 per cent increase from the 190 detections reported in 2015–16.
- The remaining 129 tryptamine detections this reporting period were reported as 'other'.

7 Small squares of absorbent paper generally decorated with artwork or designs impregnated with LSD.

8 Further information on NPS is located later in the chapter.

FIGURE 28: Number of tryptamine detections at the Australian border, 2007–08 to 2016–17
(Source: Department of Home Affairs)



IMPORTATION METHODS

In 2016–17 detections of tryptamine occurred in the international mail, air passenger/crew and air cargo streams. The international mail stream accounted for 99.3 per cent of the number of tryptamine detections at the Australian border in 2016–17, followed by air passenger/crew (0.6 per cent) and air cargo (0.1 per cent).⁹

EMBARKATION POINTS

By number, the Netherlands was identified as the primary embarkation point for tryptamine detections at the Australian border in 2016–17. Other key embarkation points this reporting period by number include Canada, Poland, UK, Germany, US, Spain, Taiwan, France and Ukraine.

By number, Canada was identified as the primary embarkation point for psilocybin detections at the Australian border in 2016–17. Other key embarkation points this reporting period by number include the Netherlands, US, UK, Poland, Switzerland, Germany, Spain, Belgium and Hungary.

DOMESTIC MARKET INDICATORS

According to the 2016 NDSHS, the proportion of the Australian population aged 14 years or older reporting using hallucinogens at least once in their lifetime remained stable at 9.4 per cent, while the reported recent use of hallucinogens decreased, from 1.3 per cent in 2013 to 1.0 per cent in 2016 (AIHW 2017a).

In a 2016 national study of regular injecting drug users, the proportion of respondents reporting the recent use of hallucinogens has remained stable at 6.0 per cent since 2015. LSD was the main hallucinogen reportedly used within this user group in 2016, followed by magic mushrooms (Karlsson & Burns 2018; Stafford & Breen 2017a).¹⁰

In a 2016 national study of regular ecstasy users, the proportion of respondents reporting the recent use of LSD increased, from 40.0 per cent in 2015 to 45.0 per cent in 2016. This further increased to 50.0 per cent in 2017. The reported recent use of magic mushrooms decreased, from 24.0 per cent in 2015 to 22.0 per cent in 2016. This increased to 27.0 per cent in 2017 (Uporova et al. 2018; Stafford & Breen 2017b).

⁹ A figure for importation methods of tryptamines detected in 2016–17 will be available on the Crime Statistics Australia website. See <<http://crimestats.aic.gov.au/>>.

¹⁰ Magic mushrooms refer to psilocybin-containing mushrooms.



PRICE

Nationally, the price per tab of LSD ranged between \$8 and \$50 in 2016–17, compared with a price range between \$5 and \$50 in 2015–16. Queensland and Tasmania were the only states to report a price for a single 20 millilitre vial of LSD this reporting period, which ranged from \$40 to \$800. No law enforcement price data for psilocybin was available in 2016–17.

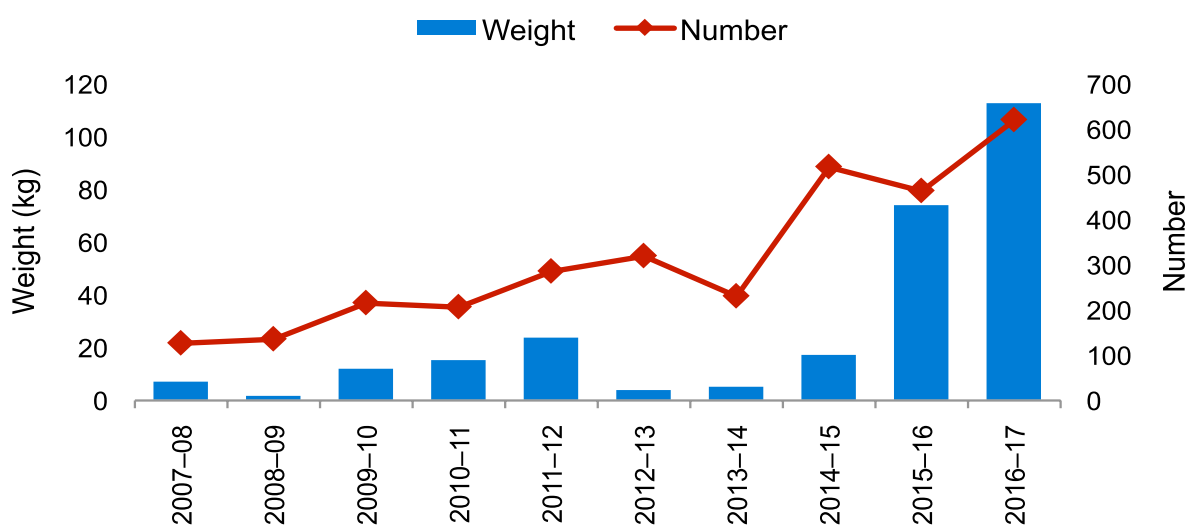
AVAILABILITY

In a 2016 national study of regular ecstasy users, the proportion of respondents reporting LSD as easy or very easy to obtain increased, from 57.0 per cent in 2015 to 69.0 per cent in 2016. This decreased to 62.0 per cent in 2017 (Uporova et al. 2018; Stafford & Breen 2017b).

SEIZURES AND ARRESTS

The number of national hallucinogen seizures increased 33.9 per cent this reporting period, from 463 in 2015–16 to a record 620 in 2016–17. The weight of hallucinogens seized nationally increased 52.4 per cent this reporting period, from 73.7 kilograms in 2015–16 to a record 112.4 kilograms in 2016–17 (see Figure 29).

FIGURE 29: National hallucinogen seizures, by number and weight, 2007–08 to 2016–17



Tasmania reported the greatest percentage increase in the number of hallucinogen seizures in 2016–17, with the Northern Territory reporting the greatest percentage increase in the weight of hallucinogens seized. New South Wales accounted for the greatest proportion of the number of national hallucinogen seizures this reporting period (67.1 per cent), while Victoria accounted for the greatest proportion of the weight of hallucinogens seized nationally in 2016–17 (61.1 per cent; see Table 19).

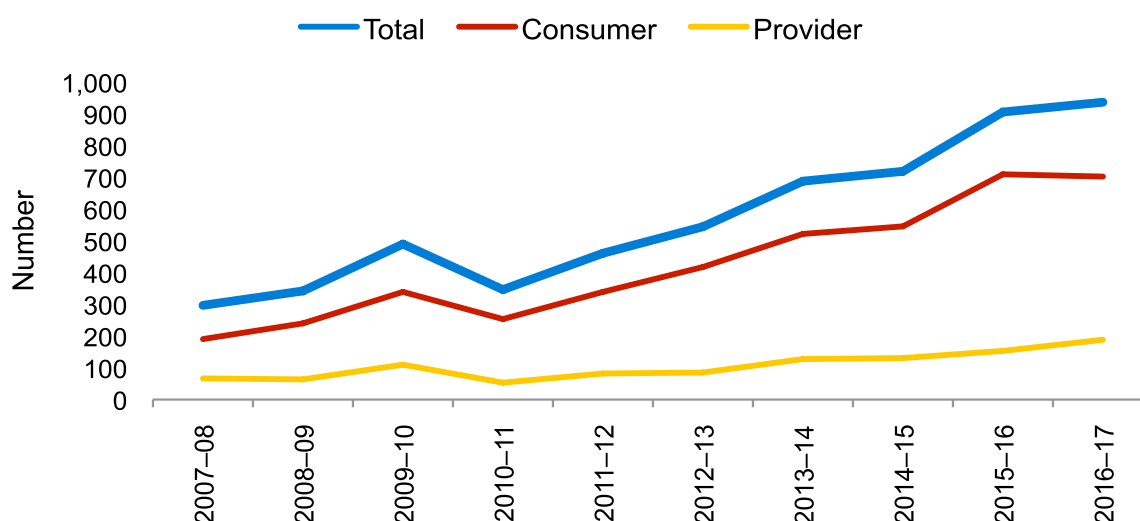
TABLE 19: Number, weight and percentage change of national hallucinogen seizures, 2015–16 and 2016–17

State/Territory ^a	Number			Weight (grams)		
	2015–16	2016–17	% change	2015–16	2016–17	% change
New South Wales	244	416	70.5	16 286	15 914	-2.3
Victoria	83	53	-36.1	19 916	68 709	245.0
Queensland	44	41	-6.8	33 860	9 186	-72.9
South Australia	0	5	–	0	11 900	–
Western Australia	74	59	-20.3	3 649	5 686	55.8
Tasmania	3	9	200.0	56	217	287.5
Northern Territory	10	27	170.0	25	422	1 588.0
Australian Capital Territory	5	10	100.0	<1	429	–
Total	463	620	33.9	73 792	112 463	52.4

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

The number of national hallucinogen arrests increased 3.3 per cent this reporting period, from 915 in 2015–16 to 945 in 2016–17. Consumer arrests continue to account for the greatest proportion of arrests, comprising 76.0 per cent of national hallucinogen arrests in 2016–17 (see Figure 30). However, the Northern Territory reported more hallucinogen provider arrests than consumer arrests in 2016–17.

FIGURE 30: Number of national hallucinogen arrests, 2007–08 to 2016–17



The Northern Territory reported the greatest percentage increase in the number of hallucinogen arrests in 2016–17. Queensland accounted for the greatest proportion of national hallucinogen arrests this reporting period (29.9 per cent), followed by Western Australia (26.6 per cent) and New South Wales (21.2 per cent). Combined, these three states account for 77.7 per cent of national hallucinogen arrests in 2016–17 (see Table 20).



TABLE 20: Number and percentage change of national hallucinogen arrests, 2015–16 and 2016–17

State/Territory ^a	Arrests		% change
	2015–16	2016–17	
New South Wales	148	200	35.1
Victoria	128	138	7.8
Queensland	385	283	-26.5
South Australia	44	43	-2.3
Western Australia	192	251	30.7
Tasmania	9	10	11.1
Northern Territory	8	19	137.5
Australian Capital Territory	1	1	0.0
Total	915	945	3.3

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, gamma-hydroxybutyrate (GHB) and related substances, the most prevalent anaesthetics used illicitly in Australia (ADF 2018d; WHO 2014).

KETAMINE

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

- Ketamine is commonly found in three 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 2018d; DrugWise 2017; UNODC 2017a; 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 2018d; DrugWise 2017; UNODC 2016; WHO 2014).



INTERNATIONAL TRENDS

Available data on global anaesthetic seizures (primarily ketamine) indicate the diversion, manufacture and international trafficking of these substances is increasing. The UNODC *World Drug Report 2017* notes that East and South-East Asia have become significant global hubs for the clandestine manufacture of ketamine. In 2015, these two regions accounted for 97.0 per cent of the total weight of ketamine seized worldwide, with China alone seizing for 19.6 tonnes of the record 23.0 tonnes seized globally.¹¹ The UNODC has also noted changes in the market. Historically ketamine was sourced through diversion from the legitimate pharmaceutical market. It is now increasingly being produced illicitly in clandestine laboratories, which are predominantly located in East and South-East Asia (UNODC 2017a).

Among the 12 EU countries who reported approximately 1 200 ketamine seizures, weighing an estimated 130 kilograms in 2015, Denmark, Italy and the UK accounted for the greatest proportion of the weight of ketamine seized. In 2015, 14 EU countries reported an estimated 1 300 GHB/GBL seizures, totalling 320 kilograms and over 1 500 litres, with Belgium and Norway accounting for 68.0 per cent of the weight and volume seized. While WCO data for ketamine was not available in 2016, data available for GHB and GBL indicate an increase in the total number of seizures from 2015 (EMCDDA 2017b; WCO 2017).

DOMESTIC TRENDS

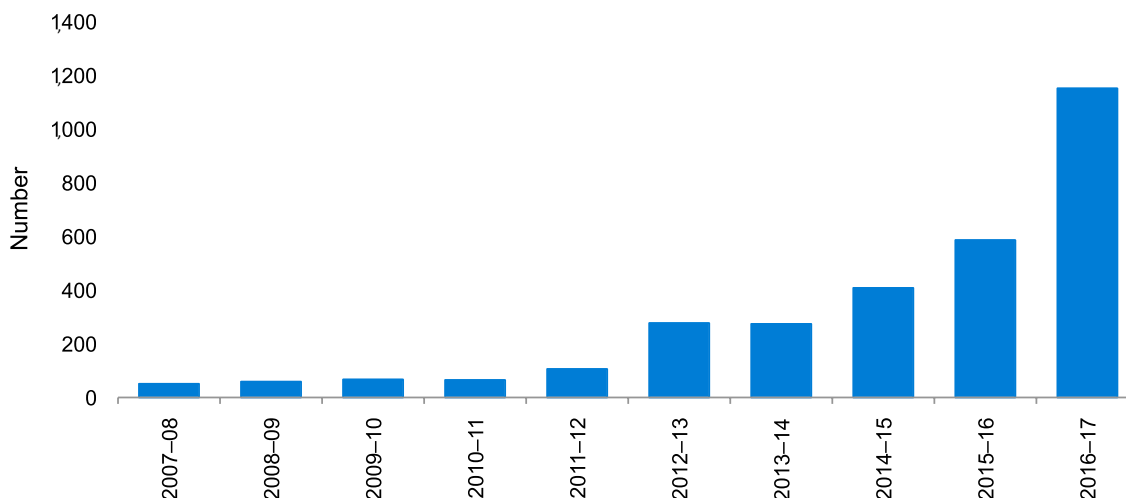
AUSTRALIAN BORDER SITUATION

Detections of anaesthetics by the Department of Home Affairs include GHB, GBL and ketamine. The number of anaesthetic detections at the Australian border increased 96.4 per cent this reporting period, from 586 in 2015–16 to a record 1 151 in 2016–17 (see Figure 31).

- The number of ketamine detections increased 99.8 per cent this reporting period, from 487 in 2015–16 to 973 in 2016–17 and account for 84.5 per cent of the number of anaesthetic detections at the Australian border this reporting period.
- The number of GHB detections increased 290.9 per cent this reporting period, from 11 in 2015–16 to 43 in 2016–17 and account for 3.7 per cent of the number of anaesthetic detections at the Australian border this reporting period.
- The number of GBL detections increased 53.4 per cent this reporting period, from 88 in 2015–16 to 135 in 2016–17 and account for 11.7 per cent of the number anaesthetic detections at the Australian border this reporting period.

¹¹ The 23 tonnes is the largest weight recorded since monitoring commenced in 1999.

FIGURE 31: Number of anaesthetic detections at the Australian border, 2007–08 to 2016–17
(Source: Department of Home Affairs)



IMPORTATION METHODS

In 2016–17 detections of anaesthetics occurred in the international mail, air and sea cargo and air passenger/crew streams. This reporting period the international mail stream accounted for 94.6 per cent of the number of anaesthetic detections at the Australian border, followed by air cargo (4.7 per cent), air passenger/crew (0.5 per cent) and sea cargo (0.2 per cent).¹²

In 2016–17 detections of GHB and GBL occurred in the international mail, air and sea cargo and air passenger/crew streams. GHB was detected in the air cargo, air passenger/crew and international mail streams this reporting period, while GBL was detected in the air cargo, international mail and sea cargo streams. In 2016–17 the international mail stream accounted for 70.8 per cent of the combined number of GHB and GBL detections at the Australian border, followed by air cargo (27.5 per cent), sea cargo (1.1 per cent) and air passenger/crew (0.6 per cent).¹³

In 2016–17 detections of ketamine occurred in the international mail, air cargo and air passenger/crew streams. This reporting period the international mail stream accounted for 99.0 per cent of the number of ketamine detections at the Australian border, followed by air cargo (0.5 per cent) and air passenger/crew (0.5 per cent).¹⁴

EMBARKATION POINTS

In 2016–17, the Netherlands was the primary embarkation point for the number of GHB and GBL detections at the Australian border. Other key embarkation points by number this reporting period include China (including Hong Kong), Lithuania, the Republic of Korea, US, Singapore, Germany, Switzerland and the UK.

In 2016–17, the UK was the primary embarkation point for the number of ketamine detections at the Australian border. Other key embarkation points by number this reporting period include the Netherlands, Germany, China (including Hong Kong), France, Canada, Malaysia, Spain and Italy.

¹² A figure for importation methods of anaesthetics detected in 2016–17 will be available on the Crime Statistics Australia website. See <<http://crimestats.aic.gov.au/>>.

¹³ A figure for importation methods of GHB and GBL detected in 2016–17 will be available on the Crime Statistics Australia website. See <<http://crimestats.aic.gov.au/>>.

¹⁴ A figure for importation methods of ketamine detected in 2016–17 will be available on the Crime Statistics Australia website. See <<http://crimestats.aic.gov.au/>>.



DOMESTIC MARKET INDICATORS

According to the 2016 NDSHS, the proportion of the Australian population aged 14 years or older reporting using GHB at least once in their lifetime increased, from 0.9 per cent in 2013 to 1.0 per cent in 2016, with the reported recent use of GHB increasing from <0.1 per cent to 0.1 per cent. In the same survey, the proportion of the Australian population aged 14 years or older reporting using ketamine at least once in their lifetime increased from 1.7 per cent in 2013 to 1.9 per cent in 2016, with reported recent ketamine use also increasing, from 0.3 per cent to 0.4 per cent (AIHW 2017a).

In a 2016 national study of regular ecstasy users, the proportion of respondents reporting recent GHB¹⁵ use increased, from 5.0 per cent in 2015 to 8.0 per cent in 2016. This decreased to 7.0 per cent in 2017. Within this user group the proportion of respondents reporting the recent use of ketamine increased considerably, from 15.0 per cent in 2015 to 26.0 per cent in 2016. This further increased to 37.0 per cent in 2017 (Uporova et al. 2018; Stafford & Breen 2017b).

PRICE

New South Wales and Queensland were the only states to report a price for 1 gram of ketamine powder, which ranged between \$150 and \$200 in 2016–17¹⁶, compared with a price range between \$50 and \$360 in 2015–16. Queensland and South Australia were the only states to report a price for 1–1.5 millilitres of GHB/GBL, which ranged between \$4 and \$8 in 2016–17, compared with a national price range of \$2 to \$12 in 2015–16. Nationally, the price of a litre of GHB/GBL ranged between \$800 and \$3 000 in 2016–17, compared with a price range between \$1 000 and \$5 000 in 2015–16.

AVAILABILITY

In a 2016 national study of regular ecstasy users, the proportion of respondents reporting ketamine as easy or very easy to obtain increased, from 47.0 per cent in 2015 to 64.0 per cent in 2016. This figure remained stable in 2017. In the same survey, the proportion of respondents reporting GHB as easy or very easy to obtain increased, from 60.0 per cent in 2015 to 83.0 per cent in 2016. This decreased to 53.0 per cent in 2017 (Uporova et al. 2018; Stafford & Breen 2017b).

PHARMACEUTICALS

MAIN FORMS

In Australia, the importation, manufacture, distribution and supply of pharmaceuticals is controlled under various 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

¹⁵ GHB category also includes 1,4B-D and GBL.

¹⁶ Victoria reported a price of \$70 000 for 1 kilogram of ketamine powder in 2016–17.

- 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 will focus on benzodiazepines and opioids, the pharmaceutical drugs most commonly misused in Australia (AIHW 2017b).

BENZODIAZEPINES

The term benzodiazepine covers a range of synthetic substances which act as central nervous system depressants.¹⁷

- Benzodiazepines are most commonly found in tablets or capsule form, stamped with a brand name for oral ingestion and may also be injected (ADF 2018e; EMCDDA 2017c; 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.¹⁸

- Opioids are available in tablet, capsule, liquid, lozenge, powder and skin patch forms (ADF 2018f; UNODC 2016).

INTERNATIONAL TRENDS

The non-medical use of prescription drugs, particularly opioids, is a growing issue globally. This is most evident in the US—where both heroin and prescription opioids continue to cause or contribute to the majority of drug overdose deaths. According to the Centers for Disease Control and Prevention (CDC), heroin overdose resulted in 15 466 fatalities in 2016. This was exceeded by fentanyl and other synthetic opioids, which caused 20 145 fatalities in 2016. The DEA's 13th National Prescription Drug Take Back Day was held in April 2017 and aims at providing a safe, convenient and responsible means of disposing of prescription drugs, while educating the general public about medications and potential abuse. Nearly 5 500 collection sites across the US participated in the 2017 event, removing 450 tonnes of unused, expired or unwanted prescription drugs from the community (CDC 2017; DEA 2017b; EMCDDA 2017b; PERF 2017; UNODC 2017a).

WCO agencies reported comparatively low seizure numbers of 'opioid painkillers/other' in 2016, which accounted for 3.3 per cent of the opiates category¹⁹. Opioid painkillers/other accounted for the second largest proportion of the weight of opiates seized in 2016, with the US accounting for the greatest proportion of the number of related seizures (WCO 2017).

17 Commonly used benzodiazepine pharmaceuticals in Australia include alprazolam, bromazepam, clonazepam, diazepam, flunitrazepam, nitrazepam, oxazepam and temazepam.

18 Commonly used pharmaceutical opioids in Australia include morphine, codeine, fentanyl, pethidine, with methadone and buprenorphine the two main pharmaceuticals used in the treatment of opioid dependence.

19 The WCO opiates category also includes heroin, opium, methadone and poppy plant parts. Specific figures for number of seizures and total weight seized were not available.



DOMESTIC TRENDS

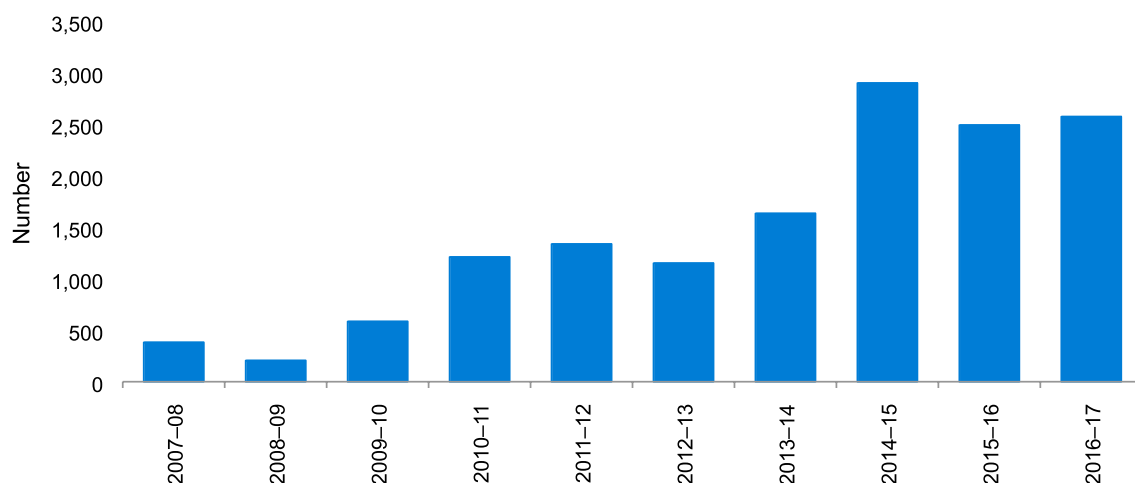
AUSTRALIAN BORDER SITUATION

The importation of prescription pharmaceuticals when imported by individuals is primarily done for personal use and without serious 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 the lower cost.

Pharmaceutical detections reported by the Department of Home Affairs only reflect detections of benzodiazepines and opioids.²⁰ The total number of benzodiazepine and opioid pharmaceutical detections at the Australian border increased 3.3 per cent this reporting period, from 2 492 in 2015–16 to 2 574 in 2016–17 (see Figure 32).

- Detections of benzodiazepines at the Australian border increased 0.2 per cent this reporting period, from 2 399 in 2015–16 to 2 404 in 2016–17.
- Detections of opioids at the Australian border increased 82.8 per cent this reporting period, from 93 in 2015–16 to 170 in 2016–17. Detected opioids include morphine, buprenorphine, methadone and oxycodone.

FIGURE 32: Number of pharmaceutical detections at the Australian border, 2007–08 to 2016–17 (Source: Department of Home Affairs)



IMPORTATION METHODS

In 2016–17 detections of benzodiazepines occurred in the international mail, air and sea cargo and air passenger/crew streams. This reporting period the international mail stream accounted for 84.0 per cent of the number of benzodiazepine detections at the Australian border, followed by air passenger/crew (13.0 per cent), air cargo (2.7 per cent) and sea cargo (0.3 per cent).²¹

²⁰ Benzodiazepine and opioids statistics only represent a component of the larger pharmaceutical category. As such, caution must be used when comparing data.

²¹ A figure for importation methods of benzodiazepines detected in 2016–17 will be available on the Crime Statistics Australia website. See <<http://crimestats.aic.gov.au>>.



In 2016–17 detections of opioids occurred in the international mail, air and sea cargo and air passenger/crew streams. This reporting period the international mail stream accounted for 74.1 per cent of the number of opioid detections at the Australian border, followed by air cargo (10.0 per cent), air passenger/crew (8.2 per cent) and sea cargo (7.6 per cent).²²

DOMESTIC MARKET INDICATORS

According to the 2016 NDSHS, the proportion of the Australian population aged 14 years or older reporting the non-medical²³ use of any pharmaceuticals (excluding over-the-counter²⁴) at least once in their lifetime increased, from 7.3 per cent in 2013 to 12.8 per cent in 2016. In the same survey, the proportion reporting the non-medical recent use of any pharmaceuticals (excluding OTC) also increased, from 3.6 per cent to 4.8 per cent (AIHW 2017a).

In a 2016 national study of regular injecting drug users, the proportion of respondents reporting recent use of pharmaceuticals decreased overall.

- Within this user group the recent use of any form (licit or illicit) of benzodiazepine decreased, from 60.0 per cent in 2015 to 57.0 per cent in 2016. This further decreased to 50.0 per cent in 2017.
- The reported recent use of buprenorphine (any form) has remained stable at 14.0 per cent since 2015.
- The reported recent use of methadone (any form) in this user group decreased, from 41.0 per cent in 2015 to 39.0 per cent in 2016. This further decreased to 37.0 per cent in 2017.
- The reported recent use of morphine (any form) in this user group decreased, from 31.0 per cent in 2015 to 29.0 per cent in 2016. This figure remained unchanged in 2017.
- The reported recent use of oxycodone (any form) in this user group decreased, from 25.0 per cent in 2015 to 21.0 in 2016. This further decreased to 20.0 per cent in 2017.
- The reported recent use of pharmaceutical stimulants (any form) within this user group decreased, from 12.0 per cent in 2015 to 10.0 in 2016. This further decreased to 9.0 per cent in 2017 (Karlsson & Burns 2018; Stafford & Breen 2017a).²⁵

A national study of regular ecstasy users showed a mixed picture for the use of pharmaceuticals (licit and illicit).

- Within this user group, the proportion of respondents reporting the recent use of any form (licit or illicit) of benzodiazepine increased, from 32.0 per cent in 2015 to 38.0 per cent in 2016. This further increased to 42.0 per cent in 2017.
- The reported recent use of buprenorphine and methadone (any form) remained stable at 1.0 per cent in 2017.

22 A figure for importation methods of opioids detected in 2016–17 will be available on the Crime Statistics Australia website. See <<http://crimestats.aic.gov.au>>.

23 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.

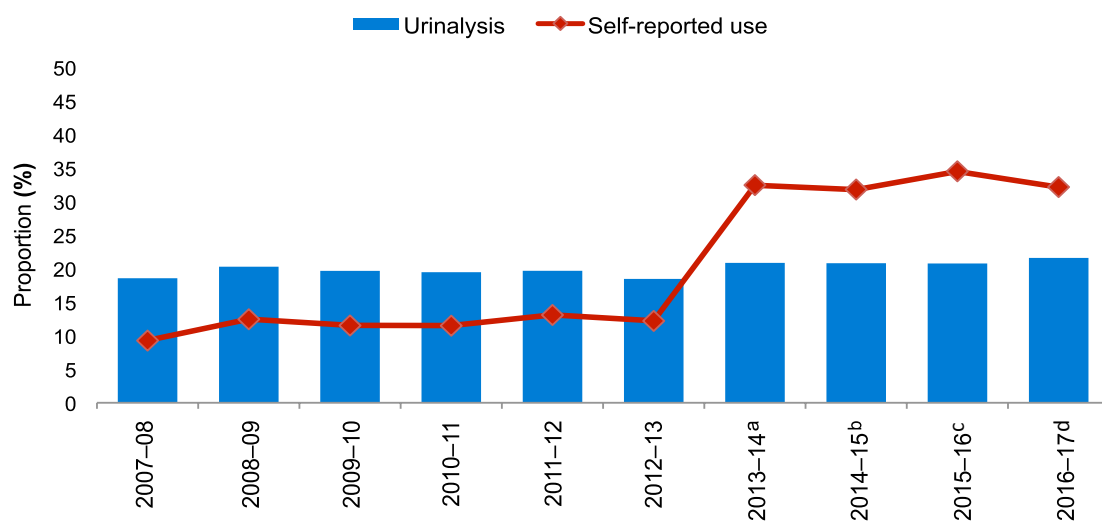
24 Over-the-counter (OTC) refers to paracetamol, aspirin and other non-opioid over-the-counter pain-killers/analgesics.

25 A figure for this data will be available on the Crime Statistics Australia website. See <<http://crimestats.aic.gov.au/>>.

- The reported recent use of pharmaceutical stimulants in this user group increased, from 33.0 per cent in 2015 to 37.0 per cent in 2016. This further increased to 44.0 per cent in 2017 (Uporova et al. 2018, Stafford & Breen 2017b).²⁶

The Drug Use Monitoring in Australia (DUMA) program, which examines drug use and offending patterns among police detainees, comprises an interviewer-assisted self-report survey and the voluntary provision of a urine sample which is subjected to urinalysis to detect licit and illicit drug use.²⁷ The proportion of detainees testing positive via urinalysis for benzodiazepines²⁸ increased this reporting period, from 20.8 per cent in 2015–16 to 21.3 per cent in 2016–17.²⁹ The self-reported recent use³⁰ of benzodiazepines decreased this reporting period, from 34.5 per cent in 2015–16 to 32.2 in 2016–17 (see Figure 33).

FIGURE 33: National proportion of detainees testing positive for benzodiazepines, 2007–08 to 2016–17³¹ (Source: Australian Institute of Criminology)



- Urine was collected in the third and fourth quarter of 2013 and the first quarter of 2014.
- Urine was collected in the third quarter of 2014 and the first and second quarter of 2015.
- Urine was collected in the third quarter of 2015 and the first and second quarter of 2016.
- Urine was collected in the third quarter of 2016 and the second quarter of 2017.

The proportion of detainees who tested positive via urinalysis for any opiates³² increased this reporting period, from 11.3 per cent in 2015–16 to 12.8 per cent in 2016–17. The self-reported recent use of opiates³³ other than heroin decreased this reporting period, from 20.2 per cent in 2015–16 to 18.2 per cent in 2016–17 (Figure 34).

²⁶ A figure for this data will be available on the Crime Statistics Australia website. See <<http://crimestats.aic.gov.au/>>.

²⁷ Detainees can participate in the survey without providing a urine sample. Cases with missing data are excluded from the relevant analysis.

²⁸ Benzodiazepines and their metabolites can be detected in urine for 2 to 14 days after administration.

²⁹ Benzodiazepines cut-off levels have been adjusted to be consistent with AS/NSZ 4308-2008.

³⁰ Recent use in DUMA program refers to self-reported use in the 12 months prior to arrest.

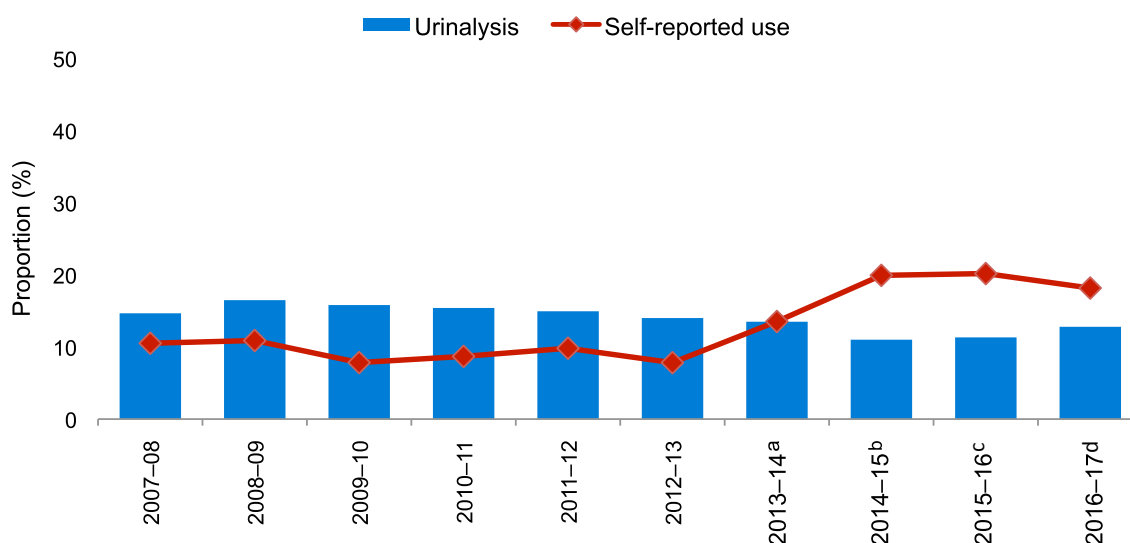
³¹ Benzodiazepine cut-off levels in this figure have been adjusted to be consistent with AS/NSZ 4308-2008.

³² Opiates and their metabolites can be detected in urine on average 2 to 3 days after administration.

³³ Recent use in the DUMA program refers to the self-reported use in the 12 months prior to arrest. For opioids, this self-report question includes use of illegal morphine, street methadone, homebake or other illegal opiates.



FIGURE 34: National proportion of detainees testing positive for any opiate compared with self-reported use of opiates other than heroin, 2007–08 to 2016–17
(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.

Wastewater analysis has become the standard for measuring population-scale consumption of a range of different chemical compounds. The underlying concepts involved in wastewater analysis are well established in Australia and have been applied to a wide range of licit and illicit drugs. Estimates of drug consumption in a population can be back-calculated from measured concentrations of drug metabolites (excreted into the sewer system after consumption) in wastewater samples. In Australia, the National Wastewater Drug Monitoring Program (NWDMP) monitors drug consumption through wastewater analysis. The NWDMP began collecting wastewater samples for analysis since August 2016, at bi-monthly intervals in capital city sites and every four months in regional sites. As at November 2017, the program tests for the consumption of fourteen licit and illicit substances in over 50 sites across Australia.³⁴

- Estimated average consumption of both oxycodone and fentanyl was higher in regional sites than in capital city sites.
- With the exception of regional Northern Territory sites for oxycodone, and Tasmania, Victoria and Western Australia regional sites for fentanyl, the NWDMP reported overall decreases in the average estimated consumption of fentanyl and oxycodone between August 2016 and August 2017.

³⁴ As at November 2017, the NWDMP tests for 14 substances including nicotine, alcohol, methylamphetamine, amphetamine, cocaine, 3,4-methylenedioxymethylamphetamine (MDMA), 3,4-methylenedioxyamphetamine (MDA), JWH-018, JWH-073, mephedrone, methylene, oxycodone, fentanyl and heroin. The public NWDMP reports are available on the ACIC website. See <<https://www.acic.gov.au/publications/intelligence-products/national-wastewater-drug-monitoring-program-report>>.

PRICE

Law enforcement price data for pharmaceuticals obtained for non-medical use is limited. Nationally, the price for a single 100 milligram tablet of MS Contin in 2016–17 ranged between \$30 and \$100, compared with a price range between \$30 and \$150 in 2015–16. Nationally, the price for a single 100 milligram tablet of OxyContin ranged between \$30 and \$150 in 2016–17. New South Wales was the only state to report the price for a single 100 microgram patch of fentanyl in 2016–17, which ranged from \$50 to \$400. Queensland and South Australia were the only states to report a price for a single benzodiazepine tablet, which ranged between \$10 and \$25 in 2016–17.

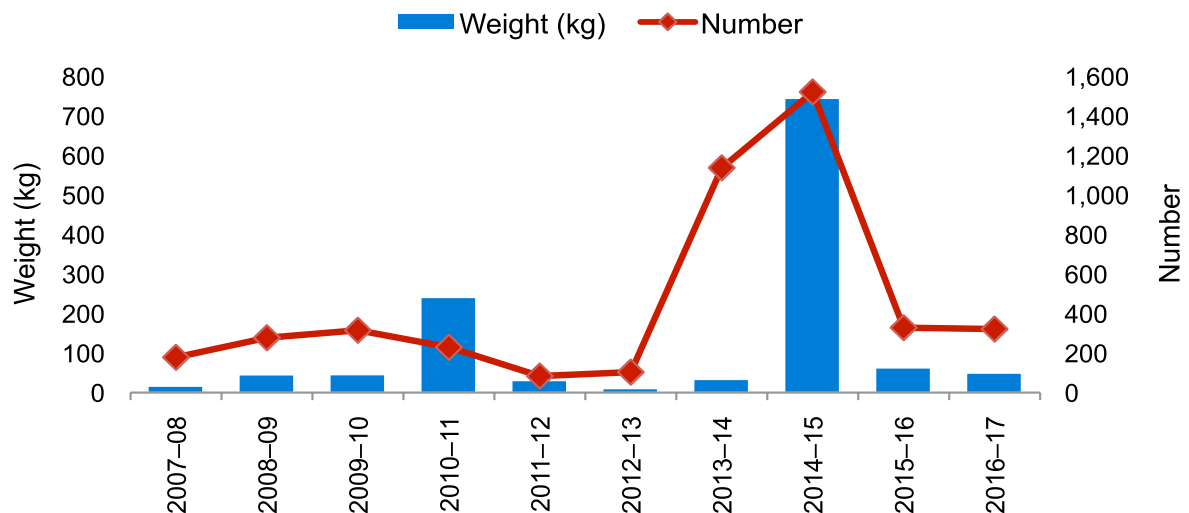
AVAILABILITY

In a 2016 national study of regular injecting drug users, the proportion of respondents reporting illicit oxycodone as easy or very easy to obtain increased, from 64.0 per cent in 2015 to 69.0 per cent in 2016. In 2017, it decreased to 60.0 per cent. In the same study, the proportion of respondents reporting illicit morphine as easy or very easy to obtain decreased, from 77.0 per cent in 2015 to 76.0 per cent in 2016. It further decreased to 74.0 per cent in 2017 (Stafford & Breen 2017a).

SEIZURES

The number of national other opioid seizures decreased 2.1 per cent this reporting period, from 328 in 2015–16 to 321 in 2016–17. The weight of other opioids seized nationally decreased 22.6 per cent this reporting period, from 58.6 kilograms in 2015–16 to 45.4 kilograms in 2016–17 (see Figure 35).

FIGURE 35: National other opioid seizures, by number and weight, 2007–08 to 2016–17



Victoria reported the greatest percentage increase in the number of other opioid seizures this reporting period, with New South Wales reporting the greatest percentage increase in the weight of other opioids seized in 2016–17. New South Wales accounted for the greatest proportion of the number (66.0 per cent) and weight (77.7 per cent) of national other opioid seizures in 2016–17 (see Table 21).



TABLE 21: Number, weight and percentage change of national other opioid seizures, 2015–16 and 2016–17

State/Territory ^a	Number			Weight (grams)		
	2015–16	2016–17	% change	2015–16	2016–17	% change
New South Wales	148	212	43.2	25 965	35 270	35.8
Victoria	18	26	44.4	17 780	8 886	-50.0
Queensland	21	11	-47.6	2 000	116	-94.2
South Australia	0	0	0.0	0	0	0.0
Western Australia	9	9	0.0	5 208	83	-98.4
Tasmania	53	26	-50.9	1 275	503	-60.5
Northern Territory	0	0	0.0	0	0	0.0
Australian Capital Territory	79	37	-53.2	6 391	542	-91.5
Total	328	321	-2.1	58 619	45 400	-22.6

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

NEW PSYCHOACTIVE SUBSTANCES³⁵

MAIN FORMS

NPS 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 three categories of analogue drugs—direct, structural and functional.
- NPS are often marketed and sold under a range of terms including ‘legal highs’³⁶, ‘herbal highs’, ‘bath salts’, ‘designer drugs’ and ‘research chemicals’ (UNODC 2017a; UNODC 2017b; UNODC 2017c; Wermuth 2006).

A wide range of NPS are available to users. This section covers three 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-tetrahydrocannabinol (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 2018g; EMCDDA 2017b; UNODC 2016).

4-MMC (4-METHYLMETHCATHINONE)

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

³⁵ 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.

³⁶ Use of the term legal high may not reflect the true legal status of these substances under Australian legislation.

- 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 2018h).

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 2018i; UNODC 2016; EMCDDA 2014; AMCD 2013).

INTERNATIONAL TRENDS

There are hundreds of substances under the broad category of NPS, with an increasing number of substances reported to the UNODC's Early Warning System each year. As at December 2015, more than 600 substances had been reported, the majority of which are synthetic cannabinoids, synthetic cathinones and phenethylamines. In 2015 alone, 100 NPS globally were reported for the first time. Over 100 countries and territories worldwide have reported one or more NPS. The UNODC notes that over 80 NPS have an established presence in the market, having been identified every year between 2009 and 2015³⁷ (UNODC 2017a; UNODC 2017b).

As only a small number of NPS are currently subject to international drug control regimes, their legal status can differ widely between countries, however many countries have adopted legislative approaches to control NPS within their country. The International Narcotics Control Board (INCB) Project ION (International Operations on NPS) promotes international cooperation among law enforcement agencies to prevent and combat the trafficking of NPS. As part of its mandate to support governments in preventing the diversion of drug precursors and other substances used in the illicit manufacture of drugs, Project ION's Incident Communication System (IONICS) provides support to operational responses on NPS and facilitates information sharing—including information on suspicious shipments, trafficking and the manufacture or production of NPS—among law enforcement agencies (INCB 2017; UNODC 2017a; UNODC 2017b).

The total number of NPS³⁸ seizures reported by WCO agencies increased by 8.0 per cent, from 2 382 seizures in 2015 to 2 573 in 2016. The total weight of NPS seized increased 7.2 per cent, from 9 064 kilograms in 2015 to 9 719 kilograms in 2016. The US accounted for the greatest proportion of the number of seizures in 2016, followed by Denmark, Saudi Arabia and Hong Kong³⁹ (WCO 2017).

37 A number of these 80 substances are now under international control, including alpha-PVP, BZP, JWH-018, MDPV, mephedrone, methylone and PMMA.

38 The WCO includes a variety of substances under the NPS category, including synthetic cathinones, synthetic cannabinoids, phenethylamines, plant-based substances, ketamine and phencyclidine-type substances, tryptamines and other. This should be taken into consideration when comparing year-on-year seizure data.

39 Specific figures on numbers and weight of seizures were not available.



DOMESTIC TRENDS

AUSTRALIAN BORDER SITUATION

There were 968 detections of NPS at the Australian border this reporting period. In 2016–17 NPS detections occurred in the international mail, air and sea cargo and air passenger streams. This reporting period the international mail stream accounted for 95.9 per cent of the number of NPS detections at the Australian border, followed by air cargo (3.4 per cent), air passenger (0.6 per cent) and sea cargo (0.1 per cent).⁴⁰

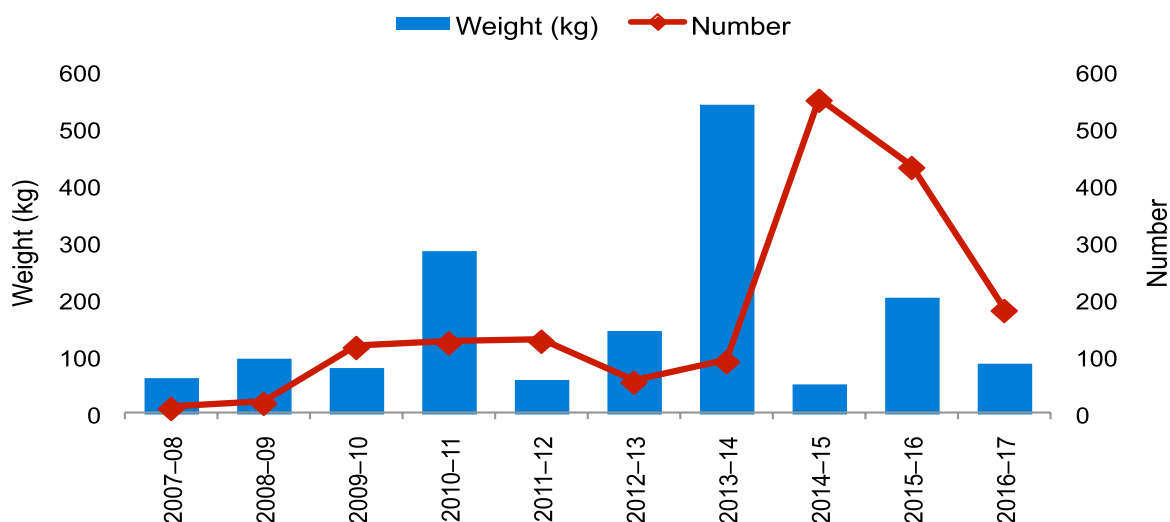
DRUG PROFILING

Although the breadth of new substances appearing on the market is large, and some only appear 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
- other.⁴¹

The number of NPS seizures at the Australian border selected for further analysis decreased 58.0 per cent this reporting period, from 433 in 2015–16 to 182 in 2016–17, while the weight of analysed seizures decreased by 56.5 per cent this reporting period, from 204.7 kilograms in 2015–16 to 89.0 kilograms in 2016–17 (see Figure 36).

FIGURE 36: Number and weight of seizures selected for further analysis and found to contain novel substances and drug analogues, 2007–08 to 2016–17⁴² (Source: Australian Federal Police, Forensic Drug Intelligence)



⁴⁰ A figure for importation methods of NPS detected in 2016–17 will be available on the Crime Statistics Australia website. See <<http://crimestats.aic.gov.au/>>.

⁴¹ Other drug analogues and NPS include 2C-group substances and ketamine analogues.

⁴² The data in Figure 78 refers only to seizures made by the AFP, examined by AFP crime scene teams, sampled and subsequently confirmed to contain a novel substance by the NMI. Seizure data does not represent all AFP seizures of NPS during these periods.



Among the many different compounds detected and reported since 2007–08, some have been more common than others in terms of the overall number of seizures and/or the weight of material seized. Cathinone-type substances have accounted for the greatest proportion of the number of seizures within this subset.

- In 2016–17, cathinone-type substances accounted for 44.5 per cent of the total number of analysed seizures, followed by amphetamine-type substances (27.5 per cent), tryptamine-type substances (13.7 per cent), other substances (12.6 per cent) and synthetic cannabinoids (1.6 per cent).

Consistent with previous reporting periods, amphetamine-type substances continue to account for the greatest proportion of the weight of analysed seizures.

- In 2016–17, amphetamine-type substances accounted for 78.5 per cent of the weight of analysed seizures.
- Tryptamine-type substances accounted for 12.5 per cent of the weight of analysed seizures in 2016–17, followed by cathinone-type substances (8.1 per cent), other substances (0.7 per cent) and synthetic cannabinoids (0.1 per cent).
- The weight of analysed amphetamine-type substances this reporting period included a 64.8 kilogram seizure of N-tert-butoxycarbonyl methylamphetamine and a 2.4 kilogram seizure of N-tert-butoxycarbonyl MDMA, also known as t-BOC methylamphetamine and t-BOC MDMA respectively.⁴³

There were a variety of cathinones detected this reporting period. Of these, N-ethyl phenylone (27 seizures weighing 5.0 kilograms) and TH-PVP (1 seizure weighing 0.5 kilograms) were the most prevalent by weight seized. N, N-dimethyltryptamine was the most detected tryptamine-type substance in 2016–17, accounting for 99.0 per cent of the weight seized within this subset. The number of synthetic cannabinoids continued to decrease this reporting period, with only 3 seizures analysed in 2016–17.

DOMESTIC MARKET INDICATORS

NPS use was included in the NDSHS for the second time in 2016 and included questions on new and emerging psychoactive substances and synthetic cannabinoids.

- For new and emerging psychoactive substances:
 - The proportion of the Australian population aged 14 years or older reporting having used a new and emerging psychoactive substance increased from 0.4 per cent in 2013 to 1.0 per cent in 2016.
 - In the same survey the reported recent use of new and emerging psychoactive substances decreased, from 0.4 per cent in 2013 to 0.3 per cent in 2016.
- For synthetic cannabinoids:
 - The proportion of the Australian population aged 14 years or older reporting having used synthetic cannabinoids at least once in their lifetime increased, from 1.3 per cent in 2013 to 2.8 per cent in 2016.

⁴³ t-BOC is a protective functional group commonly employed during chemical synthesis to protect amine groups. The addition of a t-BOC protective functional group to MDMA or methylamphetamine forms the t-BOC derivative of each respective drug. This process was likely intentionally used to mask the illicit nature of the substance and therefore evade law enforcement detection. A t-BOC protective group can be easily added and removed from compounds requiring no specialist skill, knowledge or equipment. t-BOC MDMA was first identified in AFP seizures in 2015.

- The proportion reporting the recent use of synthetic cannabinoids decreased, from 1.2 per cent in 2013 to 0.3 per cent in 2016 (AIHW 2017a).

In a 2016 national study of regular ecstasy users, the proportion of respondents reporting recent NPS use decreased, from 39.0 per cent in 2015 to 36.0 per cent in 2016. This further decreased to 33.0 per cent in 2017.

- In the same study, the proportion of respondents reporting recent NPS use (excluding synthetic cannabinoids) decreased, from 35.0 per cent in 2015 to 34.0 per cent in 2016. This further decreased to 32.0 per cent in 2017.
- The proportion of respondents reporting recent synthetic cannabinoid use also decreased, from 6.0 per cent in 2015 to 4.0 per cent in 2016. This further decreased to 2.0 per cent in 2017 (Uporova et al. 2018; Stafford & Breen 2017b).

The NWDMP tests for the presence of four NPS, including the synthetic cannabinoids JWH-018 and JWH-073 and the synthetic stimulants mephedrone and methylone.⁴⁴

- NPS are the least consumed substances of all substances tested by the NWDMP.
- Wastewater analysis did not detect the presence of JWH-018 and JWH-073 between August 2016 and August 2017.
- Nationally, mephedrone was detected 31 times while methylone was detected 217 times between August 2016 and August 2017. In all instances the quantity of mephedrone and methylone detected was below the level at which it could be reliably quantified.

PRICE

Law enforcement price data for NPS is limited. Nationally, the price range for 3 grams of synthetic cannabinoids ranged between \$35 and \$95 in 2016–17, compared with a price range between \$30 and \$95 in 2015–16.

OTHER AND UNKNOWN NOT ELSEWHERE CLASSIFIED DRUGS

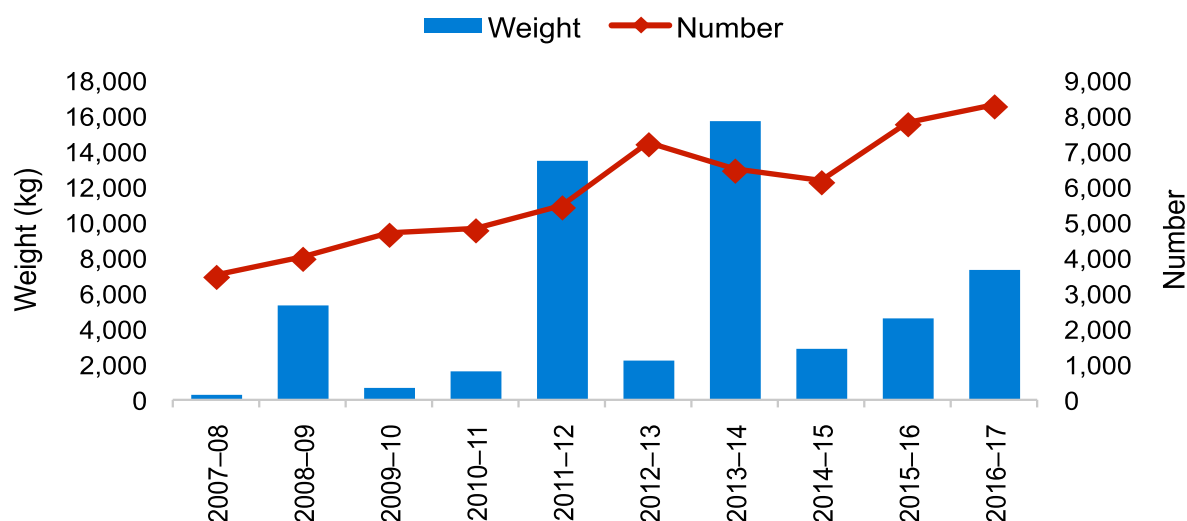
Data for national other and unknown not elsewhere classified (NEC) drug seizures and arrests capture those drugs and substances outside the specific drug categories contained in the *Illicit Drug Data Report*. This category covers a range of substances including precursors, anaesthetics, NPS, pharmaceuticals 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 AND ARRESTS

The number of national other and unknown NEC drug seizures increased 6.5 per cent this reporting period, from 7 741 in 2015–16 to a record 8 243 in 2016–17. The weight of other and unknown NEC drugs seized nationally increased 59.6 per cent this reporting period, from 4 576.5 kilograms in 2015–16 to 7 305.7 kilograms in 2016–17 (see Figure 37).

⁴⁴ The public NWDMP reports are available on the ACIC website. See <<https://www.acic.gov.au/publications/intelligence-products/national-wastewater-drug-monitoring-program-report>>.

FIGURE 37: National other and unknown not elsewhere classified drug seizures, by number and weight, 2007–08 to 2016–17



The Australian Capital Territory reported the greatest percentage increase in the number of other and unknown NEC drug seizures this reporting period, while Queensland reported the greatest percentage increase in the weight of other and unknown NEC drugs seized. New South Wales accounted for the greatest proportion of the number (50.3 per cent) and weight (66.3 per cent) of national other and unknown NEC drug seizures in 2016–17 (see Table 22).

TABLE 22 Number, weight and percentage change of national other and unknown not elsewhere classified drug seizures, 2015–16 and 2016–17

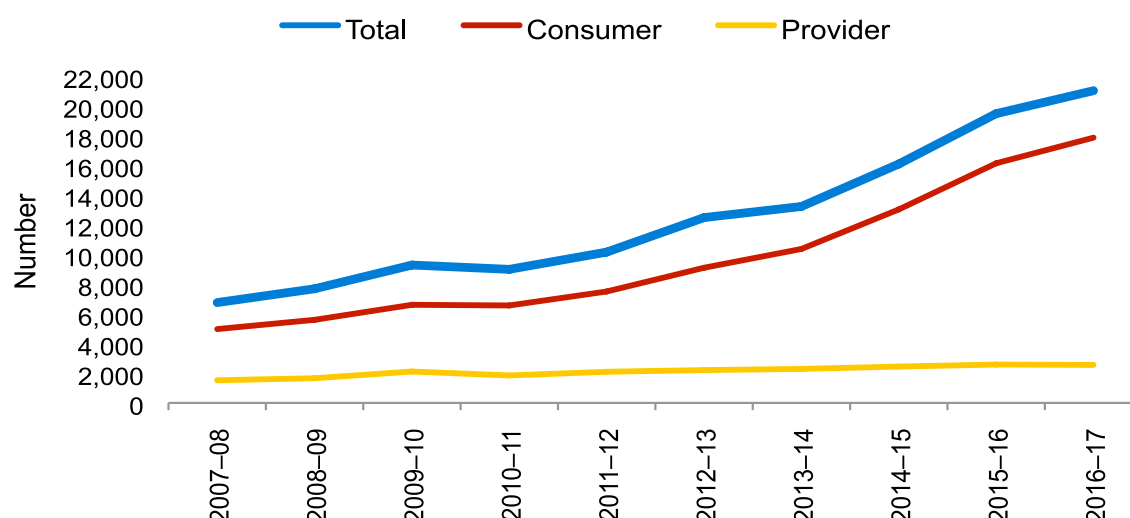
State/Territory ^a	Number			Weight (grams)		
	2015–16	2016–17	% change	2015–16	2016–17	% change
New South Wales	3 364	4 150	23.4	1 591 373	4 844 328	204.4
Victoria	1 206	739	-38.7	2 029 974	1 718 536	-15.4
Queensland	941	922	-2.0	89 685	313 326	249.4
South Australia	40	45	12.5	160 168	24 655	-84.6
Western Australia	1 810	1 935	6.9	539 426	100 794	-81.3
Tasmania	171	154	-9.9	3 578	6 248	74.6
Northern Territory	144	186	29.2	161 570	297 473	84.1
Australian Capital Territory	65	112	72.3	800	380	-52.5
Total	7 741	8 243	6.5	4 576 574	7 305 740	59.6

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

The number of national other and unknown NEC drug arrests increased 8.0 per cent this reporting period, from 19 491 in 2015–16 to a record 21 045 in 2016–17. Consumer arrests continue to account for the greatest proportion of arrests, accounting for 84.9 per cent of national other and unknown NEC drug arrests in 2016–17 (see Figure 38).



FIGURE 38: Number of national other and unknown not elsewhere classified drug arrests, by number and weight, 2007–08 to 2016–17



The Australian Capital Territory reported the greatest percentage increase in the number of other and unknown NEC drug arrests in 2016–17. Victoria accounted for the greatest proportion of national other and unknown NEC drug arrests this reporting period (28.1 per cent), followed by Queensland (27.6 per cent) and Western Australia (27.5 per cent). Combined, these three states account for 83.2 per cent of national other and unknown NEC drug arrests in 2016–17 (see Table 23).

TABLE 23: Number and percentage change of national other and unknown not elsewhere classified drug arrests, 2015–16 and 2016–17

State/Territory ^a	Arrests		% change
	2015–16	2016–17	
New South Wales	2 385	2 533	6.2
Victoria	4 783	5 906	23.5
Queensland	5 988	5 800	-3.1
South Australia	381	517	35.7
Western Australia	5 435	5 794	6.6
Tasmania	395	392	-0.8
Northern Territory	118	92	-22.0
Australian Capital Territory	6	11	83.3
Total	19 491	21 045	8.0

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

NATIONAL IMPACT

Many of the drugs and substances in this chapter have both licit and illicit uses and may be lawfully or illegally produced. They reflect diverse and complex markets, which presents challenges both in understanding the size of the related illicit market and how to address the illegal component of the broader market while minimising the impact on the legitimate market. PIEDs continue to be used and trafficked worldwide. Globally, the tryptamine market remains small but stable, with indicators in international data suggesting an increase in the diversion, manufacture and use of anaesthetics, particularly ketamine. The increasing harm caused by pharmaceuticals drugs, particularly pharmaceutical opioids, is being recognised and reported in many countries, with the number of substances in the NPS market considerable and growing.

Indicators of demand for these other drugs—including surveys of drug users, police detainees and wastewater analysis—provide a mixed picture for these drug markets within Australia.

- Indicators of demand for AAS suggest it remains relatively stable.
 - According to the NDSHS, while the reported lifetime use of steroids for non-medical purposes increased between 2013 and 2016, recent use remained stable.
 - A national study of injecting drug users and ecstasy users indicate reported recent use and use in lifetime remained stable in 2016 and 2017.
 - The ANSPS reported that the prevalence of respondents reporting PIEDs as the drug last injected has decreased.
- Based on available indicators, the demand for tryptamines remains relatively stable.
 - According to the NDSHS, reported lifetime use of hallucinogens remained stable, while recent use decreased between 2013 and 2016.
 - LSD was reported as the main hallucinogen used by respondents in a national study of regular injecting drug users, followed by magic mushrooms. Within this study, the reported recent use of hallucinogens remained stable in 2016 and 2017.
 - In a national study of ecstasy users, the proportion of respondents reporting the recent use of LSD and magic mushrooms increased between 2016 and 2017.
- Despite variation within the data, available indicators suggest an increase in the demand for anaesthetics, particularly ketamine.
 - According to the NDSHS, reported lifetime and recent use of both GHB and ketamine increased between 2013 and 2016.
 - In a national study of regular ecstasy users, the reported recent use of GHB decreased, while there was a substantial increase in the reported recent use of ketamine between 2016 and 2017.
- Indicators for the demand of illicit pharmaceuticals in Australia provide a mixed picture.
 - According to the NDSHS, the reported recent non-medical use of any pharmaceutical (excluding OTC) and use within lifetime increased between 2013 and 2016. In Australia, the pharmaceutical drugs most commonly misused are benzodiazepines and opioids.





- For benzodiazepines:
 - In a national study of police detainees, the proportion of detainees testing positive to benzodiazepines increased in 2016–17, while the self-reported recent use of benzodiazepines decreased.
 - In a national study of regular injecting drug users, respondents reporting recent benzodiazepine use decreased between 2016 and 2017.
 - According to a study of regular ecstasy users, the reported recent use of benzodiazepines increased during the same period.
- For opiates:
 - In a national study of police detainees, the proportion of detainees testing positive to opiates increased in 2016–17, while the self-reported recent use of opiates decreased.
 - In a national study of regular injecting drug users, respondents reported a decrease in the recent use of methadone and oxycodone between 2016 and 2017, with the recent use of buprenorphine and morphine remaining stable.
 - In a national study of regular ecstasy users, the reported use of buprenorphine and methadone remained stable in 2016 and 2017.
 - While there was some variation nationally, the NWDMP reported overall decreases in the average consumption of fentanyl and oxycodone between August 2016 and August 2017, with estimated average consumption of both oxycodone and fentanyl higher in regional sites than capital city sites.
- Indicators of demand for NPS provide a mixed picture for drugs within this group.
 - According to the NDSHS, both the reported lifetime use of NPS and synthetic cannabinoids increased between 2013 and 2016, while recent use decreased.
 - In a national study of regular ecstasy users, the reported recent use of both NPS and synthetic cannabinoids continued to decrease.
 - The NWDMP tested for the presence of two synthetic cannabinoids and two synthetic stimulants between August 2016 and August 2017. The NWDMP did not detect the two synthetic cannabinoids. While the synthetic stimulants were detected, they were at levels below those that could be quantified.

Indicators of supply for other drugs include border detection, seizure, arrest and profiling data.

- The number of PIEDs detected at the Australian border decreased this reporting period, with steroids accounting for the greatest proportion of detections. Both the number and weight of national steroid seizures decreased this reporting period, with the number of national steroid arrests also decreasing in 2016–17.
- This reporting period there was a record number of tryptamine detections at the Australian border, with the number of national hallucinogen seizures and arrests and the weight of hallucinogens seized nationally at record levels in 2016–17.
- There was a record number of anaesthetic detections at the Australian border this reporting period, with GBL accounting for the greatest proportion of detections.

- The number of benzodiazepine and opioid pharmaceutical detections at the Australian border increased in 2016–17, with benzodiazepines accounting for the greatest proportion of detections.
- Both the number and weight of national other opioid seizures decreased this reporting period.
- Forensic profiling of NPS seized at the Australian border and selected for further analysis indicates cathinone-type substances accounted for the greatest proportion of the number of analysed samples in 2016–17, with amphetamine-type substances accounting for the greatest proportion of the weight.
- Both the number and weight of national other and unknown NEC seizures increased this reporting period, with a record number of related national seizures and arrests reported in 2016–17.

REFERENCES

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

Advisory Council on the Misuse of Drugs (AMCD) 2013, *'NBOMe' compounds: A review of the evidence of use and harm*, United Kingdom, viewed 1 February 2018, <https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/261786/NBOMe_compounds_report.pdf>.

Alcohol and Drug Foundation (ADF) 2018a, *Drug Facts, Steroids*, viewed 21 February 2018, <<https://adf.org.au/drug-facts/steroids/>>.

Alcohol and Drug Foundation (ADF) 2018b, *Drug Facts, Performance and image enhancing drugs*, viewed 8 January 2018, <<https://adf.org.au/drug-facts/pieds/>>.

Alcohol and Drug Foundation (ADF) 2018c, *Drug Facts, Hallucinogens*, viewed 11 January 2018, <<https://adf.org.au/drug-facts/hallucinogens/>>.

Alcohol and Drug Foundation (ADF) 2018d, *Drug Facts, Ketamine*, viewed 15 January 2018, <<https://adf.org.au/drug-facts/ketamine/>>.

Alcohol and Drug Foundation (ADF) 2018e, *Drug Facts, Benzodiazepines*, viewed 19 January 2018, <<https://adf.org.au/drug-facts/benzodiazepine/>>.

Alcohol and Drug Foundation (ADF) 2018f, *Drug Facts, Fentanyl*, viewed 26 February 2018, <<https://adf.org.au/drug-facts/fentanyl/>>.

Alcohol and Drug Foundation (ADF) 2018g, *Drug Facts, Synthetic cannabis*, viewed 1 February 2018, <<https://adf.org.au/drug-facts/synthetic-cannabis/>>.

Alcohol and Drug Foundation (ADF) 2018h, *Drug Facts, Mephedrone*, viewed 1 February 2018, <<https://adf.org.au/drug-facts/mephedrone/>>.

Alcohol and Drug Foundation (ADF) 2018i, *Drug Facts, NBOMes*, viewed 1 February 2018, <<https://adf.org.au/drug-facts/nbomes/>>.



Australian Institute of Health and Welfare (AIHW) 2017a, *National Drug Strategy Household Survey 2017: detailed findings*, Drug Statistics series no. 31, AIHW, Canberra, viewed 27 November 2017, <<https://www.aihw.gov.au/getmedia/15db8c15-7062-4cde-bfa4-3c2079f30af3/21028.pdf>>.

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

Centers for Disease Control and Prevention (CDC), *National Center for Injury Prevention and Control, Division of Unintentional Injury Prevention 2017, Understanding the Epidemic*, viewed 29 January 2018, <<https://www.cdc.gov/drugoverdose/epidemic/index.html>>.

US Department of Justice, Drug Enforcement Administration (DEA) 2017a, *Drugs of Abuse: A DEA Resource Guide*, viewed 8 January 2018, <https://www.dea.gov/pr/multimedia-library/publications/drug_of_abuse.pdf#page=78>.

Drug Enforcement Administration (DEA) 2017b, *13th National Take Back Day, April 29 2017*, viewed 22 February 2018, <<https://www.dea.gov/take-back/docs/NTBI%20XIII%20Totals%20April%202017.pdf>>.

DrugWise 2017, *GHB/GBL*, viewed 15 January 2018, <<http://www.drugwise.org.uk/GHB/>>.

European Monitoring Centre for Drugs and Drug Addiction (EMCDDA) 2017a, *Hallucinogenic mushrooms drug profile*, viewed 19 December 2017, <<http://www.emcdda.europa.eu/publications/drug-profiles/mushrooms>>.

European Monitoring Centre for Drugs and Drug Addiction (EMCDDA) 2017b, *European Drug Report 2017: Trends and Developments*, EMCDDA, Lisbon.

European Monitoring Centre for Drugs and Drug Addiction (EMCDDA) 2017c, *Benzodiazepines drug profile*, viewed 19 January 2018, <<http://www.emcdda.europa.eu/publications/drug-profiles/benzodiazepine>>.

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, viewed 1 February 2018, <http://www.emcdda.europa.eu/system/files/publications/817/TDAS14003ENN_466654.pdf>.

International Narcotics Control Board (INCB) 2017, *Report of the International Narcotics Control Board for 2016*, viewed 23 February 2018, <https://www.incb.org/documents/Publications/AnnualReports/AR2016/English/AR2016_E_ebook.pdf>.

INTERPOL 2017, *Operation Pangea*, viewed 17 February 2018, <http://www.thehertelreport.com/wp-content/uploads/2017/09/IGGH_OperationPANGEA_projectsheet_2017-03_EN-LR.pdf>.

INTERPOL 2016, *Criminal intelligence initiative targets performance-enhancing drugs*, viewed 13 February 2017, <<https://www.interpol.int/News-and-media/News/2016/N2016-125>>.

Karlsson, A and Burns, L 2018, *Australian Drug Trends 2017: Findings from the Illicit Drug Reporting System (IDRS)*, Australian Drug Trends Series No. 181, National Drug and Alcohol Research Centre, University of New South Wales, Sydney.

Larance B, Degenhardt L, Dillon P and 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, viewed 8 January 2018, <<https://ndarc.med.unsw.edu.au/sites/default/files/ndarc/resources/TR.232.pdf>>.



Memedovic, S, Iversen, J, Geddes, L and Maher, I 2017, *Australian Needle Syringe Program Survey National Data Report 2012–2016: Prevalence of HIV, HCV and injecting and sexual behaviour among NSP attendees*, Sydney: Kirby Institute, University of New South Wales, Australia, viewed 30 November 2017, <https://kirby.unsw.edu.au/sites/default/files/kirby/report/ANSPS_National-Data-Report-2012-2016.pdf>.

National Drug Strategy (NDS) 2006a, *Performance and Image Enhancing Drugs – Clenbuterol*, viewed 8 January 2018, <[http://www.nationaldrugstrategy.gov.au/internet/drugstrategy/publishing.nsf/content/1A9A66204FD341EDCA2575B4001353AA/\\$File/fs_clenbuterol.pdf](http://www.nationaldrugstrategy.gov.au/internet/drugstrategy/publishing.nsf/content/1A9A66204FD341EDCA2575B4001353AA/$File/fs_clenbuterol.pdf)>.

National Drug Strategy (NDS) 2006b, *Performance and Image Enhancing Drugs – Erythropoietin (EPO)*, viewed 8 January 2018, <<https://nationaldrugstrategy.gov.au/internet/drugstrategy/publishing.nsf/Content/fs-epo>>.

National Drug Strategy (NDS) 2006c, *Performance and Image Enhancing Drugs - Human Growth Hormone (hGH)*, viewed 8 January 2018, <<https://nationaldrugstrategy.gov.au/internet/drugstrategy/publishing.nsf/Content/fs-hgh>>.

National Drug Strategy (NDS) 2006d, *Performance and Image Enhancing Drugs - Human Chorionic Gonadotrophin (hCG)*, viewed 8 January 2018, <<https://nationaldrugstrategy.gov.au/internet/drugstrategy/publishing.nsf/Content/fs-hcg>>.

Police Executive research Forum (PERF) 2017, *The Unprecedented Opioid Epidemic: As overdoses become a leading cause of death, police, sheriffs, and health agencies must step up their response*, Police Executive Research Forum Publications, Washington DC.

Royal Canadian Mounted Police (RCMP) 2017, *Operation Pangea Celebrates its 10th Anniversary – Record Number of Countries Involved in Targeting Counterfeit and Unlicensed Pharmaceuticals*, viewed 17 February 2018, <<http://www.rcmp-grc.gc.ca/en/news/2017/operation-pangea-celebrates-10th-anniversary-record-number-countries-involved-targeting>>.

Stafford, J. and Breen, C. 2017a, *Australian Drug Trends 2016: Findings from the Illicit Drug Reporting System (IDRS)*, Australian Drug Trends Series No. 163, National Drug and Alcohol Research Centre, University of New South Wales, Sydney, viewed 27 November 2017, <https://ndarc.med.unsw.edu.au/sites/default/files/ndarc/resources/national-idrs_2016_finalwith-customs.pdf>.

Stafford, J, & Breen, C 2017b, *Australian trends in ecstasy and related drug markets 2016, Findings from Ecstasy and Related Drugs Reporting System (EDRS)*, Australian Drug Trends Series No. 172, National Drug and Alcohol Research Centre, University of New South Wales, Sydney, viewed 27 November 2017, <https://ndarc.med.unsw.edu.au/sites/default/files/ndarc/resources/National_EDRS_%202016_FINALwith%20customs.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) 2017a, *World Drug Report 2017*, United Nations.

United Nations Office on Drugs and Crime (UNODC) 2017b, *UNODC Early Warning Advisory (EWA) on New Psychoactive Substances (NPS)*, viewed 18 December 2017, <<https://www.unodc.org/LSS/Home/NPS>>.

United Nations Office on Drugs and Crime (UNODC) 2017c, *2017 Global Synthetic Drugs Assessment*, viewed 18 December 2017, <https://www.unodc.org/documents/scientific/Global_Drugs_Assessment_2017.pdf>.



United Nations Office on Drugs and Crime (UNODC) 2011, *The non-medical use of prescription drugs: Policy direction issues*, Discussion paper, viewed 23 January 2018, <<https://www.unodc.org/documents/drug-prevention-and-treatment/nonmedical-use-prescription-drugs.pdf>>.

Uporova, J, Karlsson, A, Sutherland, R and Burns, L 2018, *Australian trends in ecstasy and related drug markets 2017, Findings from Ecstasy and Related Drugs Reporting System (EDRS)*, Australian Drug Trends Series No. 190, National Drug and Alcohol Research Centre, University of New South Wales, Sydney.

Wermuth, C G 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) 2017, *Illicit Trade Report 2016*, WCO, Brussels.

World Health Organization (WHO) Secretariat 2014, *Gamma-butyrolactone (GBL): Critical Review Report*, viewed 15 January 2018, <http://www.who.int/medicines/areas/quality_safety/4_3_Review.pdf>.

