



# HEROIN

## KEY POINTS

- The weight of heroin detections at the Australian border decreased from 150.6 kilograms in 2008–09 to 117.5 kilograms in 2009–10.
- Points of embarkation for heroin detected at the Australian border remained unchanged at 29 countries.
- In 2009–10, the weight of national heroin seizures decreased by 49 per cent.
- The number of national heroin and other opioid arrests remained relatively stable.

## MAIN FORMS

Heroin (diacetylmorphine) is a semi-synthetic drug belonging to the opiates group. It is the most potent and addictive derivative of the opium poppy (*Papaver somniferum*) (UNODC 2010c, 2010e). Heroin is derived from morphine, a drug present in a gummy substance extracted from the seed pod of the opium poppy (UNODC 2010a). Acetic anhydride is a crucial precursor in the conversion of morphine into heroin base. Other chemicals used include hydrochloric acid, acetone and sodium carbonate (UNODC 2007, 2010c).

The 3 primary regions of opium production include: South-West Asia (known as the 'Golden Crescent'<sup>1</sup>), South-East Asia (known as the 'Golden Triangle'<sup>2</sup>) and Latin America (Interpol 2010). Afghanistan continues to account for approximately 90 per cent of global illicit opium production (UNODC 2010b).

Heroin is a central nervous system depressant that binds to opioid receptors, which control the perception of pain and reward, respiration and blood pressure (NIDA 2010). Users may experience a surge of euphoria, warm flushing of the skin, heaviness of extremities and clouded mental functioning as well as nausea, irregular heartbeat and suppressed respiration. Long-term users may suffer from mood swings, depression and memory impairment. Heroin overdoses are often the result of suppressed respiration (BetterHealth Channel 2010; DoHA 2010; NIDA 2010).

Heroin is typically sold as a white or brownish powder. A less common form is 'black tar heroin', which is mainly produced in Mexico and sold in the United States of America (US) (NIDA 2010). 'Homebake' heroin is a crude form of heroin made from codeine extracted from pharmaceutical products (AIC 2009).

While heroin is most commonly injected, it can also be smoked, snorted/sniffed or added to cannabis or tobacco cigarettes (DoHA 2010). In Australia, the most common method of administering heroin is by intravenous injection. The second most common practise is inhaling the fumes, often referred to as 'chasing the dragon'.

The colour and appearance of heroin is neither a definitive nor reliable indicator of origin or purity. However, different grades of heroin do have different utility and desirability in the Australian market. There are 4 main grades of heroin:

- No. 4 grade heroin is a product of high purity which is easily dissolved and usually injected. It is the most common grade in developed countries.
- No. 3 grade is less refined and granular in appearance. It is considered unsuitable for injection, so is most commonly heated and the vapours inhaled.
- No. 2 and No. 1 heroin refers to heroin base, which is its form prior to conversion to a hydrochloride salt. No. 1 and No. 2 grade heroin are not commonly encountered in Australia (Booth 1998).

1 The 'Golden Crescent' encompasses large areas of Afghanistan and parts of Pakistan.

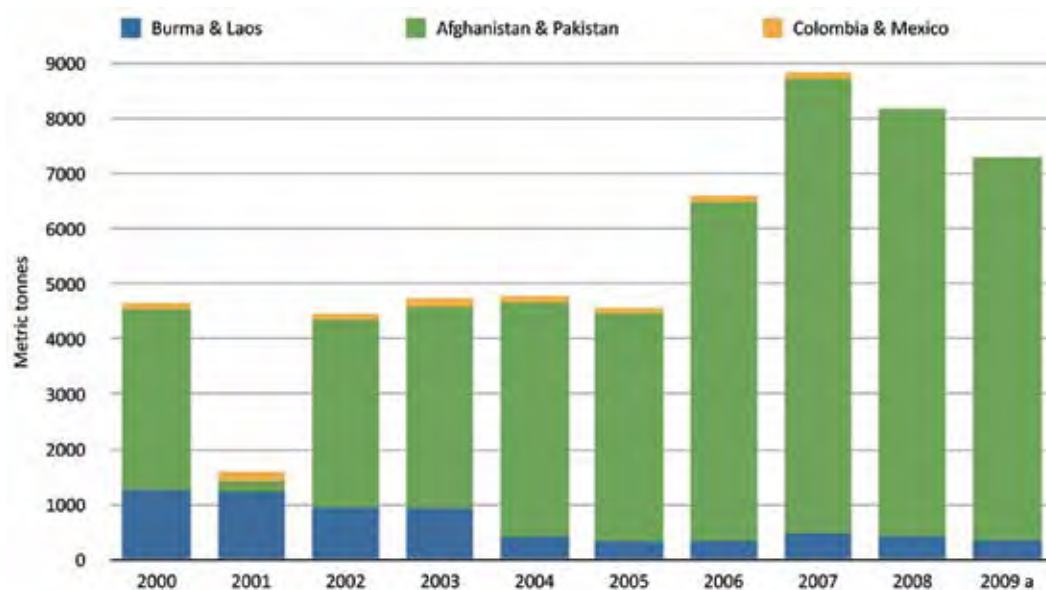
2 The 'Golden Triangle' comprises the border regions of Burma, Thailand and Laos.

## INTERNATIONAL TRENDS

Afghanistan remains the dominant global producer of opium and heroin. Opium poppy cultivation continues to be a more profitable investment than other licit crops in Afghanistan, complicating efforts to develop alternative livelihoods for Afghan farmers. Greater quantities of Afghan opium are being refined into morphine and heroin in Afghanistan. According to the UNODC the amount converted may be as high as 90 per cent of all Afghan opiates (SOCA 2010).

In 2009, total opium production in Afghanistan was estimated at 6 900 tonnes, a 10 per cent decrease from 2008 (UNODC 2010a). In the Golden Triangle, the overall number of hectares under opium poppy cultivation increased for the third successive year. However, potential opium production fell from 424 to 345 metric tonnes, largely due to a decline in opium yields in Burma. Although opium yields decreased, Burma accounted for 94 per cent of overall cultivation in the Golden Triangle in 2009 (UNODC 2009) (see Figure 26).

**FIGURE 26:** Potential production of opium, 2000 to 2009 (Source: United Nations Office on Drugs and Crime)



a Potential production figures were unavailable for Mexico in 2009

In February 2010, the United Nations Office on Drugs and Crime (UNODC) projected that Afghanistan’s 2010 opium poppy crop was likely to stabilise following a decline of one-third during the past 2 years. However, the size of Afghanistan’s 2010 opium poppy harvest is unclear following the outbreak of a fungal disease in Helmand and Kandahar provinces. The UNODC subsequently estimated that the production of opium in Afghanistan during 2010 may be reduced by a quarter (BBC 2010; UNODC 2010a).

Multi-lateral initiatives designed to reduce the flow of precursor chemicals used in the manufacture of heroin into Afghanistan have achieved some operational success. However, substantial quantities of precursor chemicals continue to be successfully trafficked into Afghanistan including acetic anhydride. Following the success of Operation Tarcet I in 2008, several countries in addition to regional and international organisations agreed to participate in Operation Tarcet II, targeting precursor chemical trafficking to Afghanistan. Significant seizures during Operation Tarcet II included 5 tonnes of acetic anhydride in Pakistan during July 2009 (UNODC 2010d).

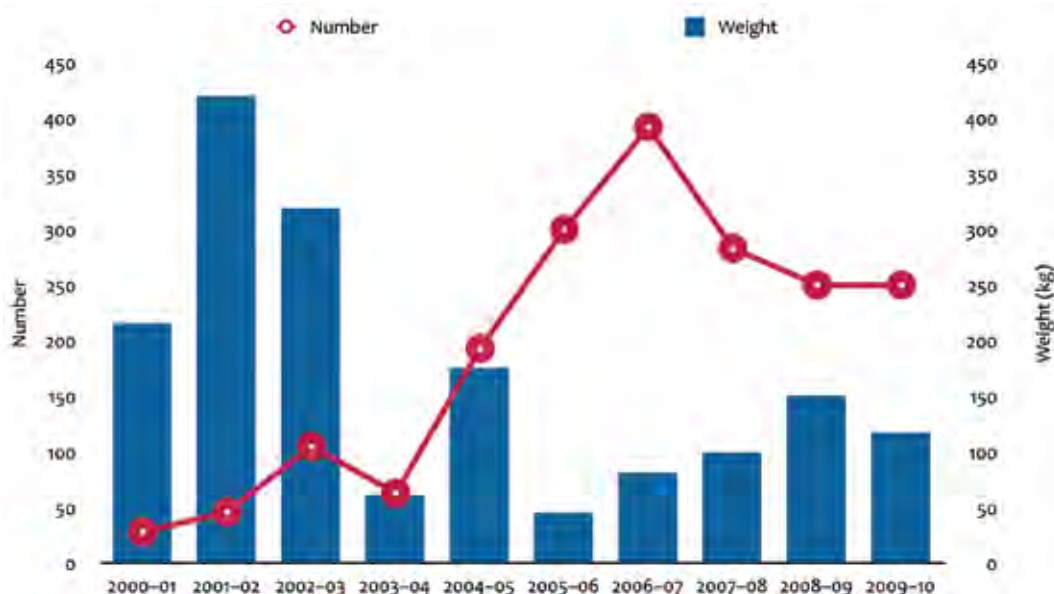
In some areas of the US, heroin availability is increasing, leading to a rise in reported rates of use particularly amongst younger users (NDIC 2010). A contributing factor is the increased heroin production in Mexico. Heroin signature analysis and investigative reporting indicates the possibility that ‘white’ heroin is being produced using Colombian processing techniques. This reporting also suggests that Mexican and South American heroin is being mixed prior to distribution in the US and that Mexican syndicates are trafficking and distributing greater quantities of heroin produced in South America. US authorities have noted that the capacity of Mexican syndicates to occupy a greater share of the US heroin market is increasing (NDIC 2010).

## DOMESTIC TRENDS

### AUSTRALIAN BORDER SITUATION

In 2009–10, the number of heroin detections at the Australian border remained stable at 250. In contrast, there was a 22 per cent decrease in the weight of detections from 150.6 kilograms in 2008–09 to 117.5 kilograms in 2009–10 (see Figure 27).

**FIGURE 27:** Number and weight of heroin detections at the Australian border, 2000–2001 to 2009–10 (Source: Australian Customs and Border Protection Service)



## SIGNIFICANT BORDER DETECTIONS

Significant border detections of heroin in 2009–10 included:

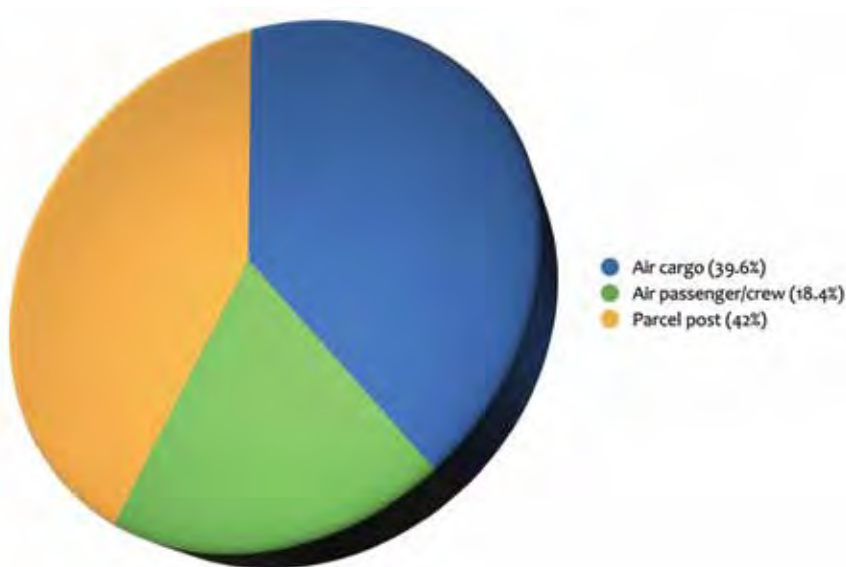
- 8 kilograms of heroin detected on 2 January 2010 concealed inside the base of an air passenger’s bags, travelling from Canada to Sydney
- 7.9 kilograms of heroin detected on 9 February 2010 concealed in wooden birds, from Singapore to Sydney
- 5.5 kilograms of heroin detected on 20 November 2009 concealed inside mah-jong and domino tiles carried by an air passenger, travelling from Vietnam to Sydney
- 4 kilograms of heroin detected on 15 October 2009 concealed inside boxes and plates from Afghanistan to Sydney
- 1.8 kilograms of heroin detected on 20 September 2009 as an internal concealment by an air passenger from Vietnam to Sydney.

The 5 detections listed above have a combined weight of 27.2 kilograms, which accounts for 23 per cent of the total weight of heroin detected at the Australian border in 2009–10.

## IMPORTATION METHODS

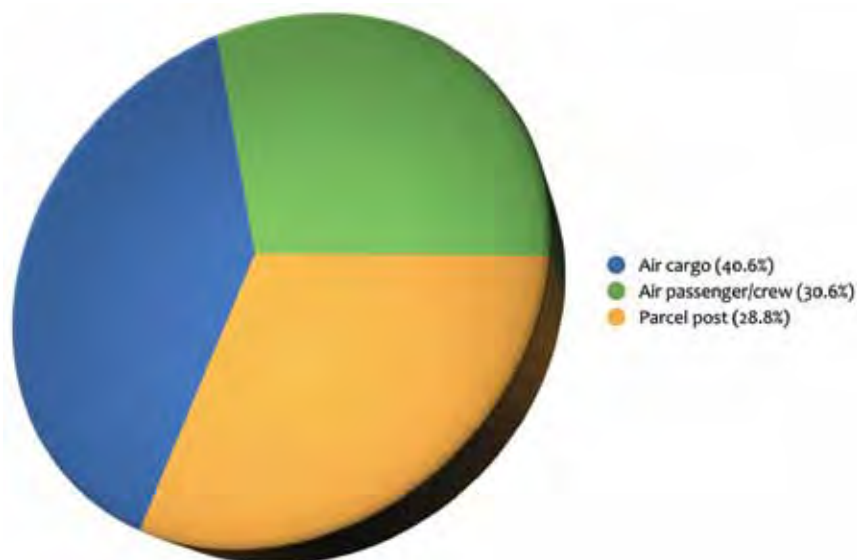
In 2009–10, parcel post continued to be the most commonly detected mode of importation, accounting for 42 per cent of heroin detections. Methods of heroin concealment identified during this reporting period included CDs, book covers, machinery and internal concealment by air passengers (see Figure 28).

**FIGURE 28:** Number of heroin detections at the Australian border, as a proportion of total detections, by method of importation, 2009–10 (Source: Australian Customs and Border Protection Service)



In terms of weight, the air cargo stream accounted for 40.6 per cent of heroin detections. Consistent with 2008–09, there were no heroin detections in the sea cargo stream in 2009–10 (see Figure 29).

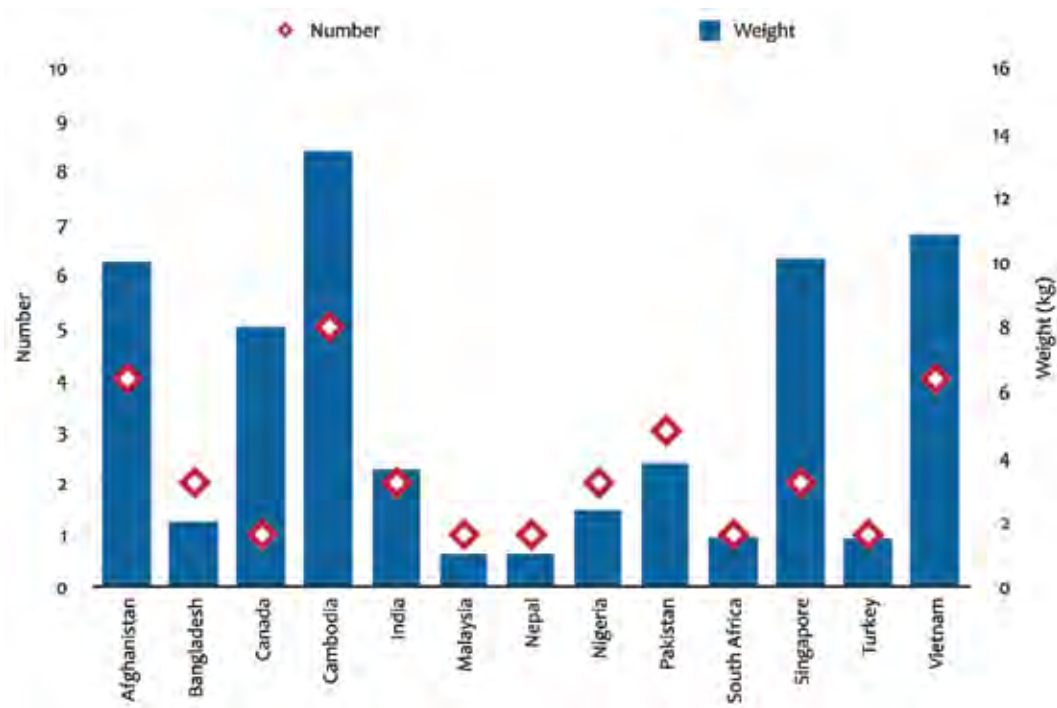
**FIGURE 29:** Weight of heroin detections at the Australian border, as a proportion of total weight, by method of importation, 2009–10 (Source: Australian Customs and Border Protection Service)



## EMBARKATION POINTS

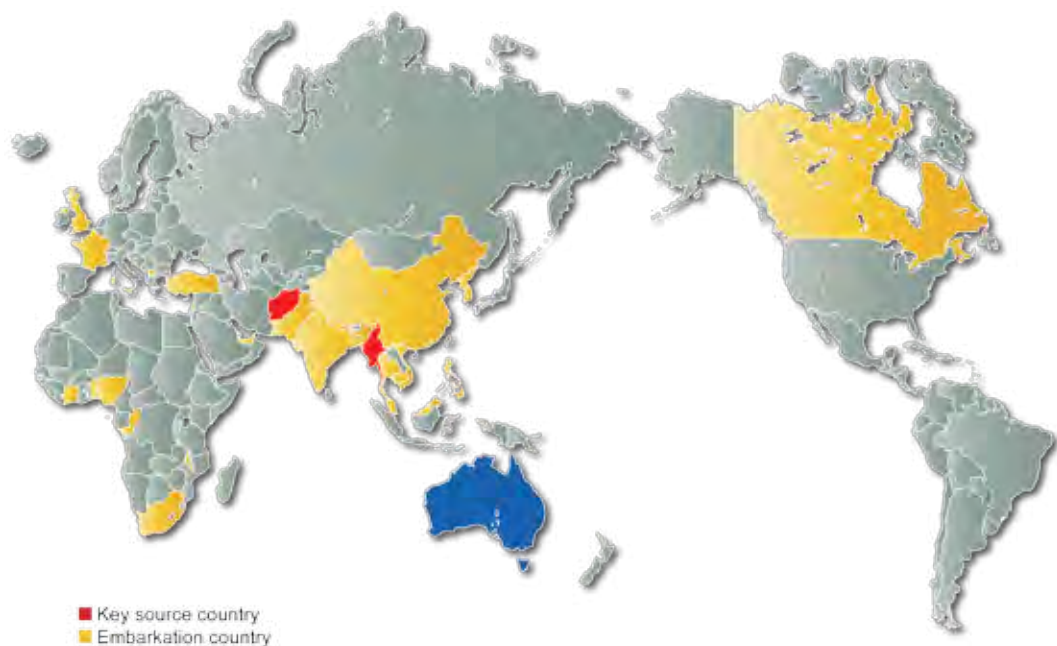
In 2009–10, there were 29 detections of individual importations of heroin over 1 kilogram. These detections accounted for 59 per cent of the total weight of heroin detected at the Australian border in 2009–10. Cambodia was the prominent embarkation point, by weight and number. Other embarkation points for detected individual importations of heroin over 1 kilogram (in aggregate weight order) were Vietnam, Singapore, Afghanistan and Canada (see Figure 30).

**FIGURE 30:** Country of embarkation for individual heroin importations of more than 1 kilogram detected at the Australian border, 2009–10 (Source: Australian Customs and Border Protection Service)



The number of embarkation countries for heroin importations into Australia has increased significantly over the past decade, from 10 countries in 2000–01 to 29 in 2008–09 and 2009–10. Figure 31 illustrates the key source countries and embarkation points of heroin detected at the Australian border in 2009–10.

**FIGURE 31:** Key source countries and embarkation points of heroin detected at the Australian border, 2009–10



## DRUG PROFILING

The Australian Federal Police (AFP) Australian Illicit Drug Data Centre (AIDDC) is a forensic drug profiling program used to identify regions of origin and manufacturing trends for samples submitted from seizures made at the Australian border. The program also allows for comparisons within and between seizures to identify distinct batches of drugs or potentially demonstrate links between groups involved in illicit drug manufacture or trafficking. However, only certain drug types are examined and not every seizure of drugs at the Australian border is analysed or profiled.<sup>3</sup>

Of the heroin profiled across 2005–2009, the proportion originating from South-West Asia increased until 2008. This trend reversed in 2009. However, results from the first 6 months of 2010 suggest South-West Asia may again be the dominant source country (see Table 7). In reference to Tables 7 and 8, it should be noted that as the number of significant border seizures of heroin continues to be relatively low, the weight figures are highly sensitive to fluctuations.

**TABLE 7:** Geographical origin of heroin samples as a proportion of total bulk weight of analysed AFP seizures, 2005–June 2010

Year	South-East Asia (%)	South-West Asia (%)	Unclassified (%)
Jan–Jun 2010	41.2	57.8	1.0
2009	48.2	40.9	10.9
2008	26.0	66.3	7.7
2007	47.9	50.6	1.5
2006	70.1	27.4	2.7
2005	78.9	18.0	3.1

Source: Australian Federal Police 2010, Australian Illicit Drug Data Centre

The data in Table 8 is based on the same analytical samples used as the basis for Table 7, but is organised in terms of seizures rather than actual bulk weight. In contrast to findings in Table 7, as a proportion of the number of AFP samples analysed, South-East Asia was the origin for the majority of analysed samples in the first 6 months of 2010 (see Table 8).

**TABLE 8:** Geographical origin of heroin samples as a proportion of analysed AFP seizures, 2008–June 2010

Year	South-East Asia (%)	South-West Asia (%)	Unclassified (%)	South-East Asia and Unclassified (%)	South-West Asia and Unclassified (%)
Jan–Jun 2010	56.8	40.5	2.7	–	–
2009	53.9	42.6	3.4	–	–
2008	44.1	44.1	11.8	–	–

Source: Australian Federal Police 2010, Australian Illicit Drug Data Centre

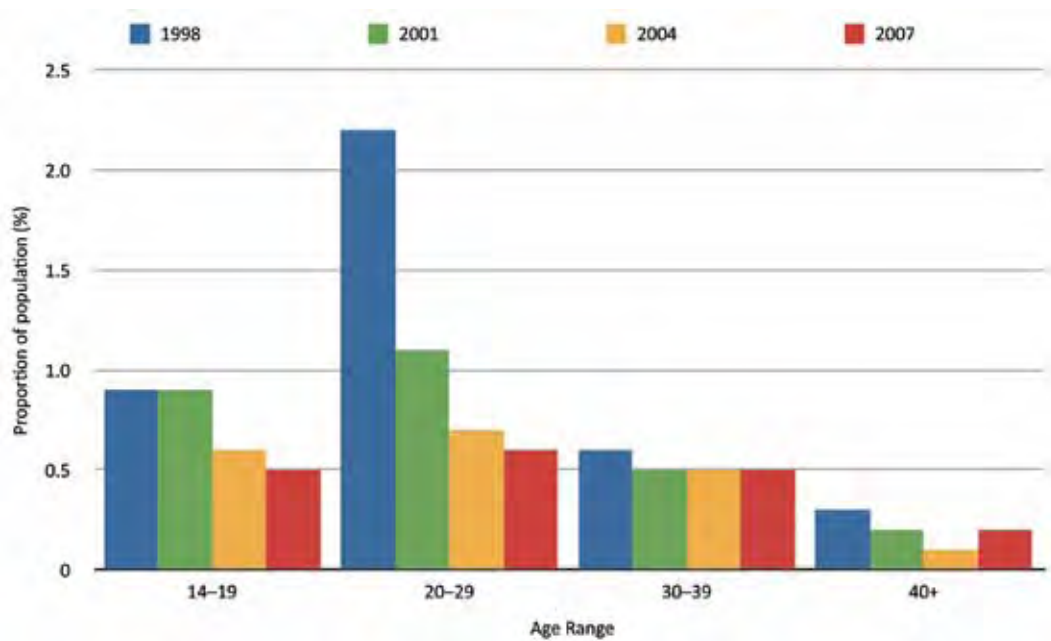
<sup>3</sup> In examining AIDDC figures, it should be noted that they do not reflect the total weight of a particular drug seized in each year, but only those samples and seizures submitted for analysis. There is typically a lag of several months between the seizure and receipt of profiling results. Additionally, the absence of similar data for street-level seizures in Australia makes it difficult to extrapolate the impact of any observed trends on drugs reaching consumers.

## DOMESTIC MARKET INDICATORS

According to the 2007 National Drug Strategy Household Survey, the proportion of the population reporting heroin use in the 12 months preceding interview (recent use) remained unchanged from 2001 at 0.2 per cent of the population (AIHW 2008).

The proportion of 20–29 year olds reporting recent heroin use within the Australian population has continued to decrease, from 2.2 percent in 1998 to 0.6 per cent in 2007. Other age groups have remained relatively stable (see Figure 32) (AIHW 2000, 2002, 2005, 2008).

**FIGURE 32:** Recent heroin use as a proportion of the Australian population, 1998–2007 (Source: Australian Institute of Health and Welfare 2000, 2002, 2005, 2008)



A 2009 study of regular injecting drug users found that heroin remained the drug of choice for 52 per cent of respondents. Respondents who reported heroin use in the 6 months preceding interview increased from 60 per cent in 2008 to 64 per cent in 2009 (Stafford & Burns 2010). Early findings from the 2010 survey indicate that these results have remained relatively stable (NDARC 2010).

In 2009, an estimated 43 445 Australians received treatment for dependence on opioid drugs, such as heroin. This is an increase of 5 per cent from 2008. However, the proportion of heroin treatment episodes<sup>4</sup> decreased from 11 per cent in 2007–08 to 10 per cent in 2008–09 (AIHW 2010).

<sup>4</sup> Treatment episodes are defined as a period of contact, with definite dates of commencement and cessation, between a client and a treatment provider. Treatment episodes may vary in length, from one day to several months or longer, depending on the type of treatment provided.

## PRICE

Nationally the price for a gram of heroin in 2009–10 ranged between \$200 and \$600. South Australia reported an increase in heroin price per gram, from \$450 in 2008–09 to \$600 in 2009–10. In Victoria, prices for larger weights of heroin increased significantly—an ounce<sup>5</sup> of heroin increased from \$6 800 in 2008–09 to \$12 000 in 2009–10, and a ‘half Asian catti’<sup>6</sup> increased from \$95 000 in 2008–09 to between \$120 000 and \$180 000 in 2009–10.

## PURITY

Figure 33 illustrates the annual median purity of heroin in Australia since 2000–01. The median purity of analysed heroin samples over the last decade is 23 per cent. In 2009–10, the median purity of heroin samples remained relatively stable, with the exception of Western Australia, which recorded the highest median purity at 51 per cent.

**FIGURE 33:** Annual median purity of heroin samples, 2000–01 to 2009–10

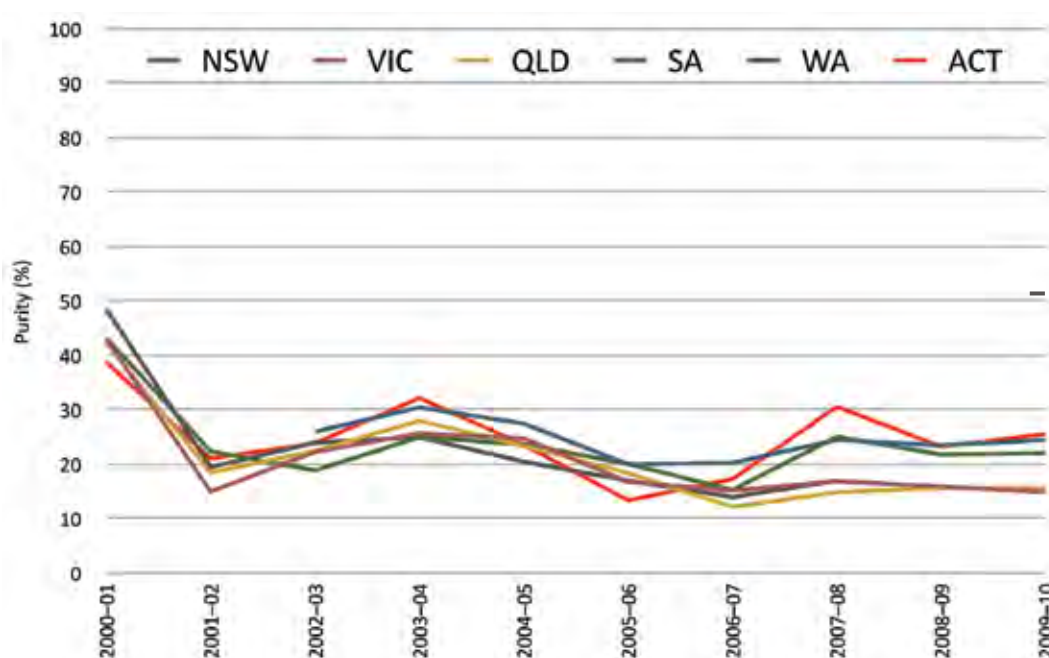
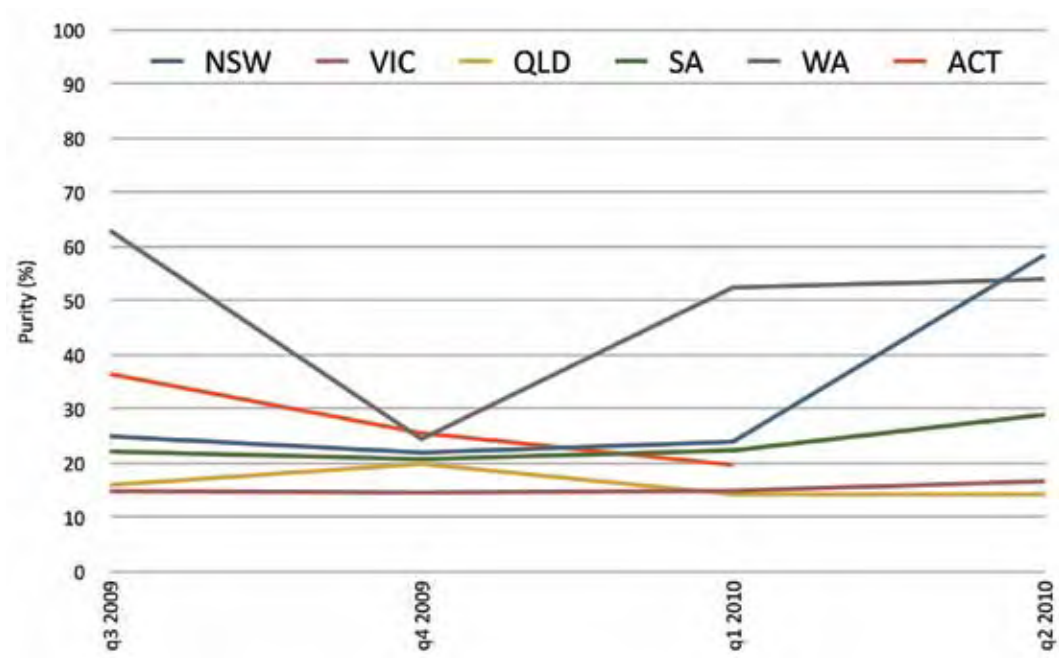


Figure 34 illustrates the median purity of analysed heroin samples on a quarterly basis in 2009–10. In 2008–09, quarterly purity results were fairly consistent between the reporting states. In comparison, 2009–10 has seen a significant range in the purity levels, from 14.3 per cent in Victoria to 63 per cent in Western Australia.

<sup>5</sup> An ounce equates to approximately 28 grams.

<sup>6</sup> A half Asian catti equates to approximately 350 grams.

**FIGURE 34:** Quarterly median purity of heroin samples, 2009–10

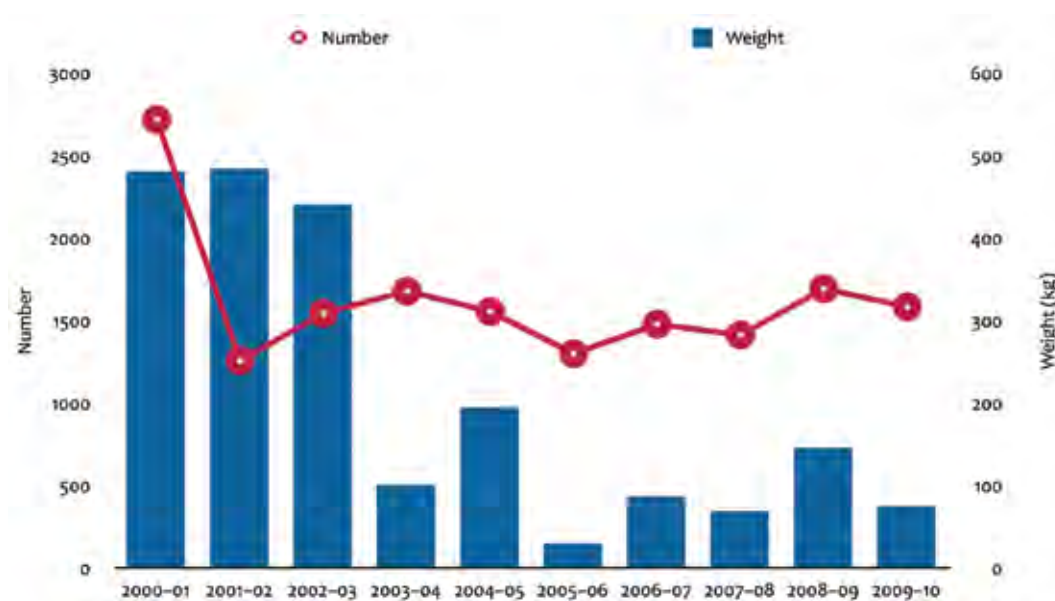


### AVAILABILITY

According to a 2009 national study of regular injecting drug users, 90 per cent of respondents reported the availability of heroin as easy or very easy to obtain. A significant proportion of participants in the Northern Territory and Tasmania were not able to comment about the availability of heroin, suggesting low levels of availability in these states. In comparison, New South Wales had a 94 per cent response rate (Stafford & Burns 2010). Early findings from the 2010 study indicate a decrease in availability, with 86 per cent of respondents reporting heroin as easy or very easy to obtain (NDARC 2010).

### SEIZURES AND ARRESTS

During 2009–10, both the number and weight of national heroin seizures decreased. The number of seizures decreased by 6.4 per cent, from 1 691 in 2008–09 to 1 582 in 2009–10. The weight of seizures decreased by 48.7 per cent, from 145.5 kilograms in 2008–09 to 74.7 kilograms in 2009–10 (see Figure 35).

**FIGURE 35:** National heroin seizures, by weight and number, 2000–01 to 2009–10


New South Wales, Queensland, Western Australia and the Australian Capital Territory all recorded decreases in the number of heroin seizures during 2009–10. South Australia reported the greatest percentage increase in the number of heroin seizures. New South Wales continued to account for the greatest number of heroin seizures.

All jurisdictions reported decreases in the weight of heroin seizures during 2009–10, with the exception of South Australia which increased by 91.5 per cent. While the weight of heroin seizures in New South Wales decreased by 51 per cent, New South Wales still accounted for 73 per cent of the weight of national heroin seizures (see Table 9).

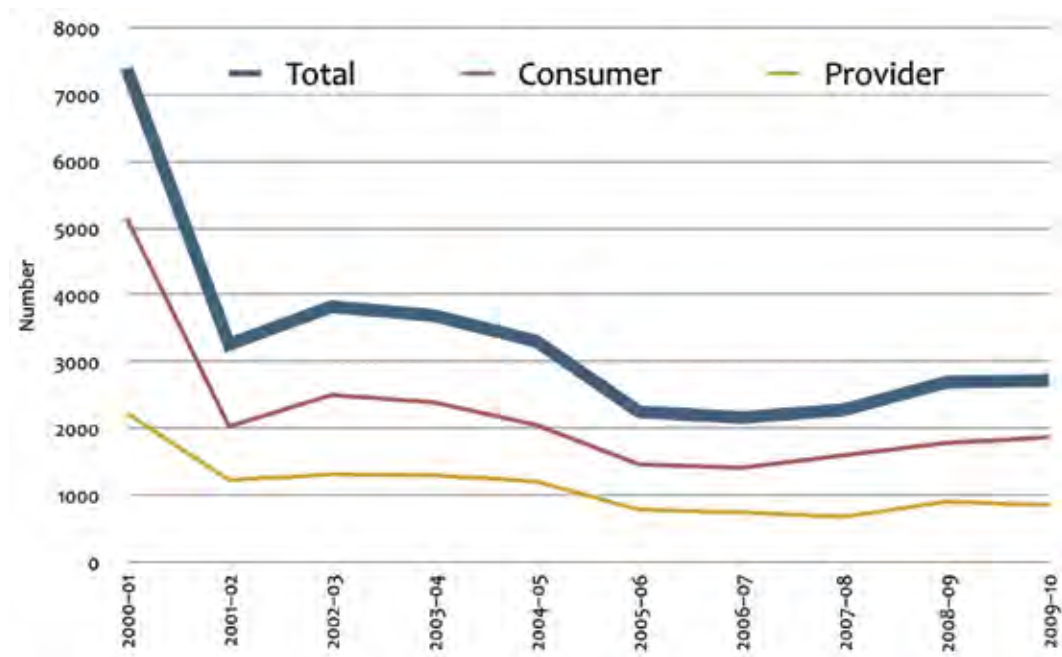
**TABLE 9:** Number, weight and percentage change of national heroin seizures, 2008–09 and 2009–10

State/territory <sup>a</sup>	Number			Weight (grams)		
	2008–09	2009–10	% change	2008–09	2009–10	% change
New South Wales	868	845	-2.6	111 408	54 550	-51.0
Victoria	306	318	3.9	17 102	13 899	-18.7
Queensland	232	184	-20.7	6 713	1 713	-74.5
South Australia	29	49	69.0	577	1 105	91.5
Western Australia	199	149	-25.1	8 741	3 334	-61.9
Tasmania	0	0	–	0	0	–
Northern Territory	2	3	50.0	641	2	-99.7
Australian Capital Territory	55	34	-38.2	405	151	-62.7
<b>Total</b>	<b>1 691</b>	<b>1 582</b>	<b>-6.4</b>	<b>145 587</b>	<b>74 754</b>	<b>-48.7</b>

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

The number of consumer arrests for heroin and other opioids in 2009–10 is the highest recorded since 2004–05. However, arrest numbers remain low compared to earlier in the decade. Consumer arrests increased by 6 per cent and accounted for 68 per cent of national heroin and other opioid arrests this reporting period. The number of provider arrests decreased by 5 per cent in 2009–10 (see Figure 36).

**FIGURE 36:** Number of national heroin and other opioid arrests, 2009–10



In 2009–10, there was a small increase in the number of national heroin and other opioid arrests, from 2 693 in 2008–09 to 2 767 in 2009–10. The Australian Capital Territory recorded the greatest percentage decrease in arrests from 2008–09, while Tasmania and South Australia reported the greatest increases. Arrests in Victoria remained relatively stable and continue to account for 50 per cent of all heroin and other opioid arrests within Australia (see Table 10).

**TABLE 10:** Number and percentage change of national heroin and other opioid arrests, 2008–09 and 2009–10

State/territory <sup>a</sup>	Arrests		% change
	2008–09	2009–10	
New South Wales	819	795	-2.9
Victoria	1 353	1 379	1.9
Queensland	249	286	14.9
South Australia	62	96	54.8
Western Australia	144	150	4.2
Tasmania	18	30	66.7
Northern Territory	0	1	–
Australian Capital Territory	48	30	-37.5
<b>Total</b>	<b>2693</b>	<b>2767</b>	<b>2.7</b>

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

## NATIONAL IMPACT

In 2009, global opium cultivation decreased. Despite reporting a 10 per cent decrease in opium production, Afghanistan remained the largest opium producing country in the world, representing 89 per cent of illicit opium production in 2009 (UNODC 2010e). The size of Afghanistan's 2010 opium poppy harvest remains unclear following the outbreak of an opium fungal disease in Helmand and Kandahar provinces.

South-East and South-West Asia remain the key source regions of heroin detected at the Australian border in 2009–10. As a proportion of bulk weight analysed, the majority of heroin samples analysed in 2009 originated from South-East Asia. However, the majority of samples analysed in the first 6 months of 2010 originated from South-West Asia. As a proportion of the number of seizures, the majority of samples analysed in 2009 and the first 6 months of 2010 originated from South-East Asia.

The number of embarkation countries for heroin importations into Australia has expanded over the last decade, increasing from 10 countries in 2000–01 to 29 in 2009–10. For individual heroin detections over 1 kilogram, the prominent embarkation points this reporting period were Cambodia, Vietnam, Afghanistan, Singapore and Pakistan.

Although the number of heroin detections at the Australian border remained unchanged at 250 detections, the weight of detections decreased from 150.6 kilograms in 2008–09 to 117.5 kilograms in 2009–10. The World Customs Organization reported that heroin detections in the maritime sector are unusual. No sea cargo detections were made at the Australian border in 2009–10 (WCO 2010).

Following a large increase in the weight of national heroin seizures in 2008–09, the weight of national seizures decreased by 49 per cent in 2009–10. The number of national heroin seizures also decreased 2 per cent this reporting period. Although heroin and other opioid arrests increased in 2009–10, they have remained relatively stable and considerably lower than those reported earlier in the decade.

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