

Drug-related hospital stays in Australia 1993-2006

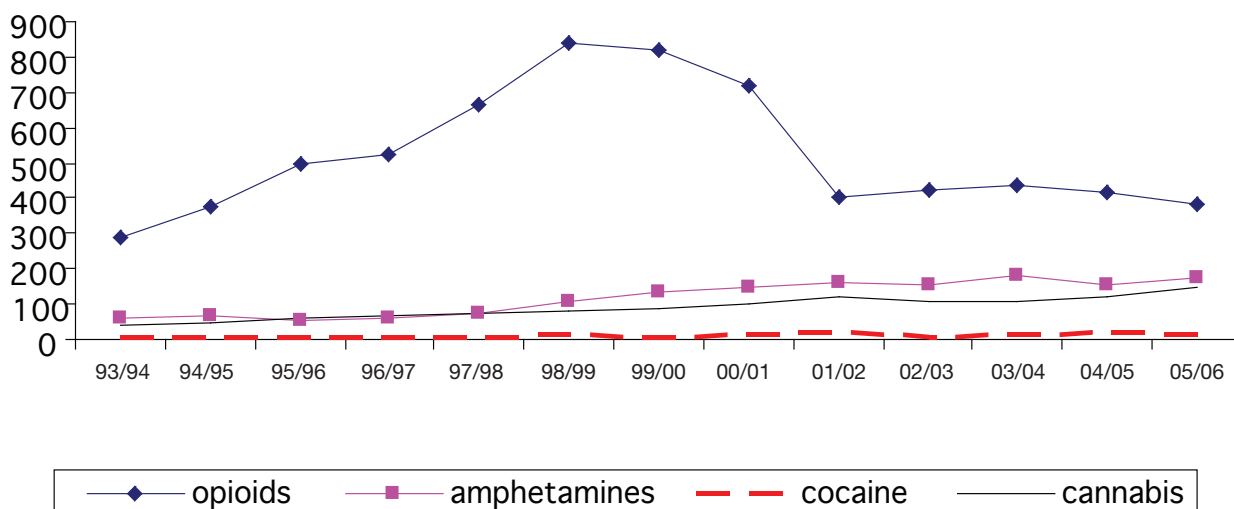


Prepared by Amanda Roxburgh, Lucy Burns and Louisa Degenhardt, National Drug and Alcohol Research Centre
Funded by the Australian Government Department of Health and Ageing

Recommended citation: Roxburgh, A., Burns, L. and Degenhardt, L. (2008). Drug-related hospital stays in Australia, 1993-2006. Sydney: National Drug and Alcohol Research Centre

- ✚ This bulletin presents data on drug-related hospital separations in Australia from 1993-2006 for the following drug types: opioids, cocaine, amphetamines and cannabis.
- ✚ A hospital separation is defined as an episode of care for an admitted patient, which may refer to a total hospital stay (from admission to discharge), or a portion of a hospital stay beginning or ending in a change of type of care, or transfer to another hospital.
- ✚ At the time of separation, a principal (main) diagnosis, and up to 40 secondary diagnoses may be made. The data presented in this bulletin include only hospital separations where opioids, cocaine, amphetamines or cannabis were determined to be the principal (i.e. main) reason for the hospital stay. The data presented will therefore be an under-estimate of the total number of drug-related hospital admissions.
- ✚ Hospital separations are coded according to the World Health Organization's (WHO) International Statistical Classification of Diseases (ICD) and Related Problems. The ICD 10th revision (ICD 10 AM) (National Centre for Classification in Health, 1998) was used to code data dating from 1999 to the present in South Australia (SA), Western Australia (WA), and Queensland (QLD). The remaining jurisdictions commenced using ICD 10 AM codes in 1998. Prior to this, the ICD 9th revision (ICD 9 CM) (National Coding Centre, 1996) was used to code hospital separations.
- ✚ Hospital separations are presented as numbers per million persons aged 15-54; calculated using the Australian Bureau of Statistics estimated resident population figures as at 30 June each year.
- ✚ Figure 1 shows the number of hospital separations per million persons for each of the four drug types over the thirteen year time period (1993-2006). Numbers of separations were highest for opioids across the entire period, followed by amphetamines, cannabis and cocaine.

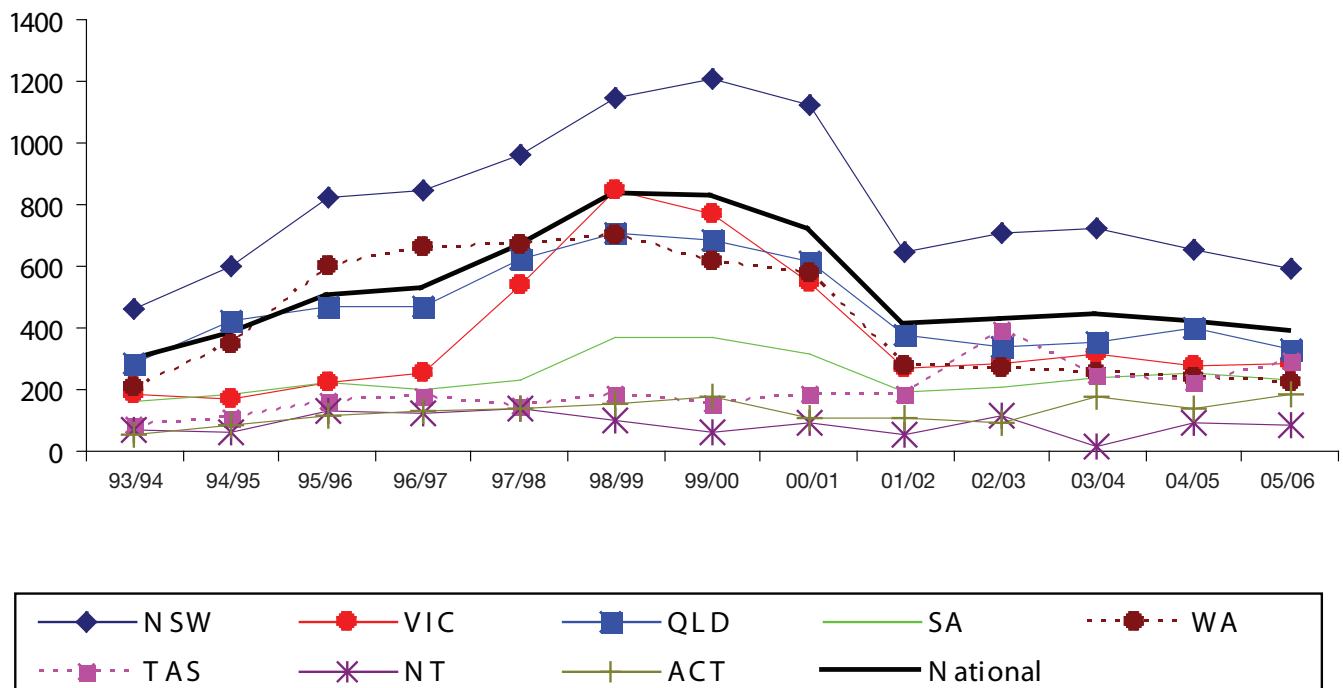
Figure 1: Number per million persons of principal drug-related hospital separations in Australia among persons aged 15-54, by drug type, 1993-2006



Opioid-related hospital separations

- + Nationally, following a dramatic decline in 2001/02, opioid-related hospital separations have remained relatively constant (Figure 2).
- + At the jurisdictional level separations were continually highest in New South Wales (NSW). Within NSW, following a peak in 2001/02, separations declined over time. The 2005/06 figure was the lowest recorded since 1993/94. This general trend was reflected in Qld, Vic, SA and WA, although greater year to year variability was noted in the later years. The 2001/02 peak was not discernable in the NT, TAS or the ACT
- + Separations for opioid dependence have accounted for approximately two-thirds of all principal opioid-related separations during the entire period. Reflecting the national trend for all opioid separations, separations for opioid dependence declined dramatically in 2001/02.
- + Research suggests several reasons for the decline in opioid dependence presentations after 2001/02. First, there may be lower levels of physical dependence among users as a consequence of lower heroin purity at street level being reported during the “heroin shortage” in 2001 (Degenhardt et al., 2005). Second, the number of regular heroin users in NSW most likely declined following the shortage (Degenhardt and Day, 2004), resulting in fewer presentations for dependence. Likewise, with lower purity in heroin being reported, many users may have been able to manage withdrawal without presenting to hospital.
- + An issue of current concern is the potential misuse of prescription opioids such as morphine and oxycodone. Preliminary analysis suggests that between 13 and 14% of principal opioid-related hospital separations since 2001/02 were due to either morphine or oxycodone poisoning.

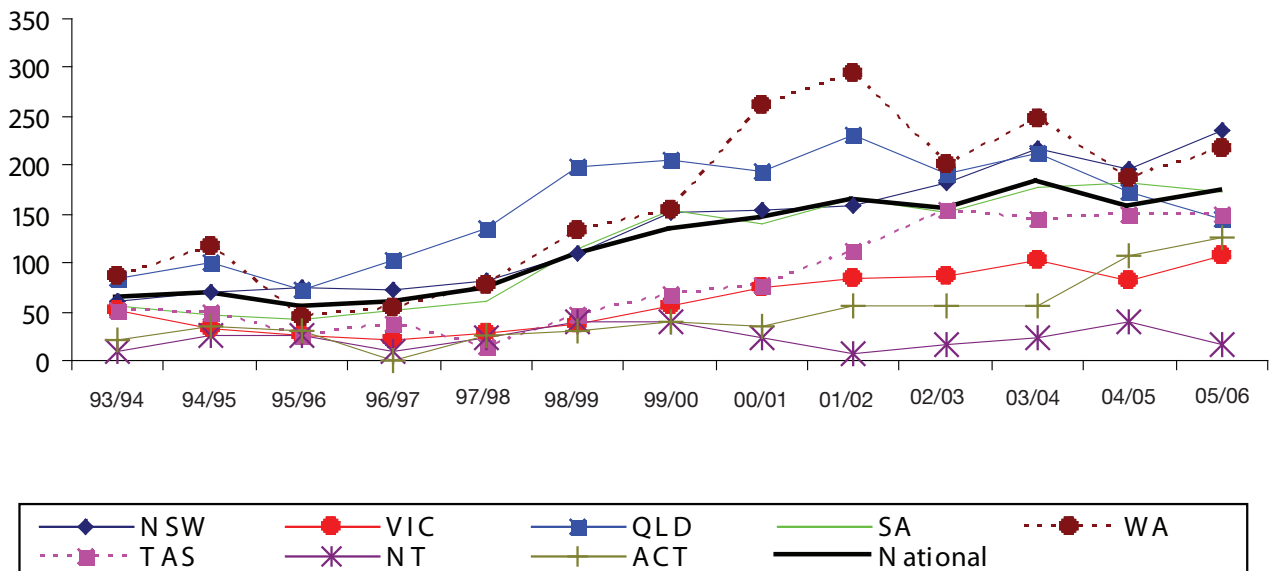
Figure 2: Number per million persons of principal opioid-related hospital separations in Australia among persons aged 15-54, 1993-2006



Amphetamine-related hospital separations

- + Amphetamine-related hospital separations were second highest among the drug types examined (Figure 3 shows the numbers per million persons). At a national level, these separations steadily increased between 1993/94 and 2003/04 and remained relatively stable since this time.
- + At the jurisdictional level, in 2005/06 amphetamine-related separations were highest in NSW after steadily increasing over the thirteen year period. Numbers were also relatively high in QLD and WA, with a peak occurring in both these jurisdictions in 2001/02, followed by a subsequent decline.
- + The trend seen in amphetamine-related separations in QLD is consistent with police detections of clandestine laboratories manufacturing methamphetamine (Kinner et al., 2006). QLD recorded the highest number of detections of laboratories in Australia between 1997/98 and 2001/02 (McKetin et al., 2005) although detections have stabilised over the past few years (Australian Crime Commission, 2007).
- + Separations have increased over the past two years in the ACT, whilst separations in the other jurisdictions have fluctuated. The trend in the ACT is consistent with findings from the Illicit Drug Reporting System (IDRS) that show an increasing proportion of regular injecting drug users (IDU) reporting methamphetamine as their drug of choice, as well as recent methamphetamine use (Campbell and Degenhardt, 2007).
- + At their peak (in 2003/04 at 2,066 nationally), amphetamine-related separations represented less than one-quarter of the highest number of opioid-related separations recorded (in 1998/99 at 9,117 nationally) during the thirteen-year period.
- + In 2005/06, amphetamine dependence accounted for over one-third (38%) of all principal amphetamine-related separations, while amphetamine poisoning accounted for one-third (33%) of these separations.
- + The proportion of total amphetamine-related separations that are attributable to amphetamine dependence is lower than the proportion of opioid-related separations that are attributable to opioid dependence during the thirteen-year period. Assuming treatment seeking is associated with severity of dependence, this is consistent with findings of a study conducted in Sydney on the utilisation of health services by regular methamphetamine users (Kelly et al., 2005), where only 10% of those interviewed reported receiving treatment for problems associated with their methamphetamine use in the past 12 months.
- + Although amphetamine-related separations only accounted for relatively smaller numbers of hospital separations, these separations are likely to utilise a disproportionate amount of public health resources, as methamphetamine users tend to present when they are in crisis.

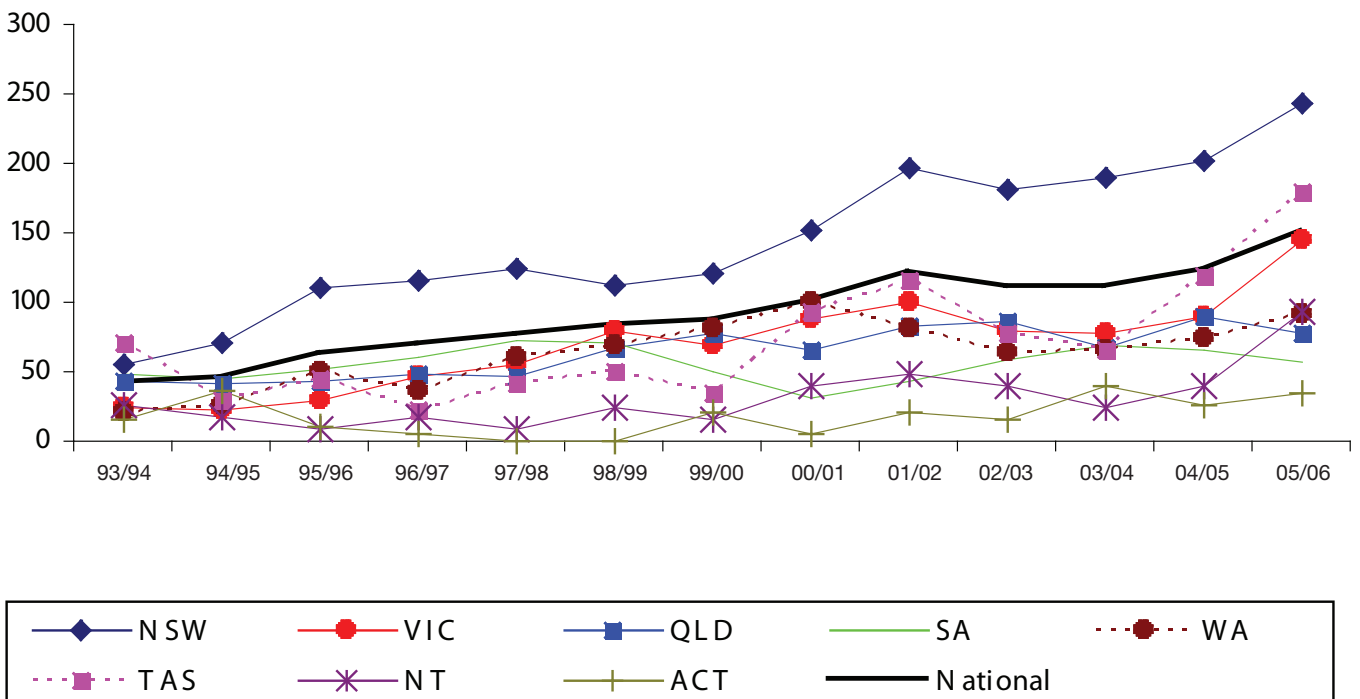
Figure 3: Number per million persons of principal amphetamine-related hospital separations in Australia among persons aged 15-54, 1993-2006



Cannabis-related hospital separations

- + Cannabis-related separations were the third highest in number across the four drug types (following opioids and amphetamines) (Figure 4). At a national level these separations have steadily increased over the thirteen-year period.
- + At a jurisdictional level, numbers of separations were highest in NSW, where they have continued to increase across the period. Separations in VIC were also relatively high and increased sharply in 2003/04 as did rates in TAS and the NT. Separations in the other jurisdictions showed more variability over this time.
- + The percentage of all cannabis-related separations that were due to dependence increased from 1993/94 when they accounted for 42% of principal cannabis-related separations, to approximately three-quarters (73%) in 2005/06.
- + While cannabis dependence separations have continued to increase since 1998, numbers are still comparatively smaller than those for opioid dependence. This, together with a declining trend in cannabis use being reported among the general population in Australia (Australian Institute of Health and Welfare, 1999, Australian Institute of Health and Welfare, 2002, Australian Institute of Health and Welfare, 2005), indicates that only a small proportion of cannabis users in Australia go on to develop dependence and to experience problems associated with their cannabis use.
- + Nevertheless, increasing numbers of cannabis-related hospital separations suggest that among those people who have continued to use cannabis, they appear to be increasingly experiencing problems associated with this use. This increase may also reflect delayed effects of dependence among cannabis users who were initiating use at a relatively young age in Australia in the 1990s (Degenhardt et al., 2000).

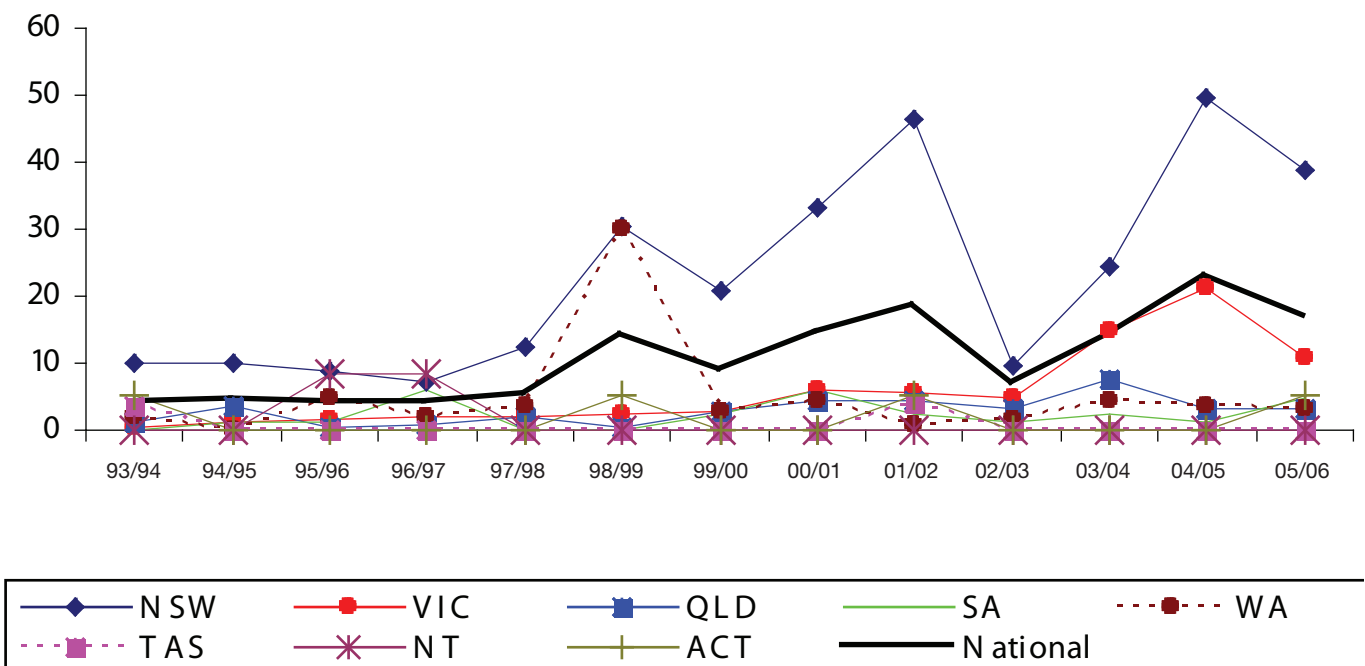
Figure 4: Number per million persons of principal cannabis-related hospital separations in Australia among persons aged 15-54, 1993-2006



Cocaine-related hospital separations

- + Cocaine-related separations were the lowest across the four drug types during the thirteen-year period (Figure 5). Nationally these separations have increased since 1993/94, although at a relatively low level.
- + NSW recorded the highest number of cocaine-related separations per million persons, which accounted for the majority of the national total during this period. VIC also recorded relatively high numbers of cocaine-related separations in the past few years, while the remaining jurisdictions recorded much lower numbers throughout the time period.
- + The higher numbers of cocaine-related separations in NSW and VIC is consistent with recent Australian research (Shearer et al., 2005) showing that both Sydney and Melbourne are the largest markets for cocaine use in Australia.
- + Sharp increases in cocaine-related separations were recorded in NSW in 2001/02, coinciding with the heroin shortage and increased reports among injecting drug users about problems associated with cocaine use (Roxburgh et al., 2004, Stafford et al., 2006). Increases were also evident in 2004/05 and 2005/06, which is consistent with increases in cocaine use reported among regular injecting drug users in Sydney (Black et al., 2007).
- + Trends in cocaine-related separations should be interpreted with caution due to relatively small numbers in many jurisdictions.

Figure 5: Number per million persons of principal cocaine-related hospital separations in Australia among persons aged 15-54, 1993-2006



Implications

- + Although opioid-related hospital separations have declined dramatically since 2001/02 they remain the highest of the four drug types examined in this bulletin. Focus should therefore continue on the development of effective treatment programs for opioid dependence, as well as enhancement of existing treatment programs.
- + Amphetamine-related hospital separations remain the second highest of the four drug types examined. Given that many methamphetamine users tend to access health services when they are in crisis, emphasis should be given to the development of effective treatment programs including the identification of strategies to engage this group in treatment.
- + The continued increase in cannabis-related hospital separations illustrates the need to continue disseminating information about the harms associated with cannabis, both to groups who are already experiencing problems and across the community more broadly. The establishment of the National Cannabis Prevention and Information Centre in 2007 (NDARC, UNSW) is an important progression in the development and dissemination of readily accessible information about cannabis-related harms and available treatment options.
- + Cocaine-related hospital separations were the lowest across the drug types examined, indicating that the cocaine market in Australia, particularly outside of the metropolitan Sydney area, is relatively small. Nevertheless, given the dramatic increases in cocaine-related harms recorded during the time of the heroin shortage, monitoring of this market (i.e. through the Illicit Drug Reporting System) remains a priority.
- + Information contained in this bulletin comes from the National Hospital Morbidity Database. This database is fundamental to the monitoring capacity of the National Illicit Drug Indicators Project; providing invaluable information about trends in drug-related harms in Australia, as well as the context within which these trends can be understood. Each additional year of data adds further value to the project and, in conjunction with other available data sources, provides a reliable framework within which to inform evidence-based drug policy in Australia.

Acknowledgements

We would like to acknowledge the Australian Institute of Health and Welfare, in particular Katrina Burgess, and all of the State and Territory Health Departments, for providing us with access to the National Hospital Morbidity Database.

Related links:

For more information on NDARC research, go to: <http://ndarc.med.unsw.edu.au/>
For more information about the AIHW, go to: <http://www.aihw.gov.au>
For more information on ICD-10, go to: <http://www.who.int/whosis/icd10/>



The National Drug and Alcohol Research Centre University of New South Wales
Sydney NSW 2052 Ph: +61 2 9385 0333 Fax: +61 2 9385 0222

ISSN: 1834-1918

Recommended citation: Roxburgh, A., Burns, L. and Degenhardt, L. (2008). Drug-related hospital stays in Australia, 1993-2006. Sydney: National Drug and Alcohol Research Centre

References

- AUSTRALIAN CRIME COMMISSION (2007) *Illicit Drug Data Report 2005-06*. Canberra, Commonwealth of Australia.
- AUSTRALIAN INSTITUTE OF HEALTH AND WELFARE (1999) *1998 National Drug Strategy Household Survey: First Results*. Canberra, Australian Institute of Health and Welfare.
- AUSTRALIAN INSTITUTE OF HEALTH AND WELFARE (2002) *2001 National Drug Strategy Household Survey: detailed findings*. Canberra, Australian Institute of Health and Welfare.
- AUSTRALIAN INSTITUTE OF HEALTH AND WELFARE (2005) *2004 National Drug Strategy Household Survey - detailed findings*. Canberra, Australian Institute of Health and Welfare.
- BLACK, E., ROXBURGH, A. & DEGENHARDT, L. (2007) *NSW Drug Trends 2006: Findings from the Illicit Drug Reporting System*. Sydney, National Drug and Alcohol Research Centre, University of New South Wales.
- CAMPBELL, G. & DEGENHARDT, L. (2007) *Australian Capital Territory Drug Trends 2006: Findings from the Illicit Drug Reporting System (IDRS)*. Sydney, National Drug and Alcohol Research Centre, University of New South Wales.
- DEGENHARDT, L., CONROY, E., DAY, C., GILMOUR, S. & HALL, W. (2005) *The impact of the Australian heroin shortage on demand for and compliance with treatment for drug dependence*. *Drug and Alcohol Dependence*, 79, 129-135.
- DEGENHARDT, L. & DAY, C. (Eds.) (2004) *The course and consequences of the heroin shortage in New South Wales, Adelaide*, Australasian Centre for Policing Research.
- DEGENHARDT, L., LYNKEY, M. & HALL, W. (2000) *Cohort trends in the age of initiation of drug use in Australia: NDARC Technical Report Number 83*. Sydney, National Drug and Alcohol Research Centre, University of New South Wales.
- KELLY, E., MCKETIN, R. & MCLAREN, J. (2005) *Health service utilisation among regular methamphetamine users*. Sydney, National Drug and Alcohol Research Centre, University of New South Wales.
- KINNER, S., FISCHER, J. & LLOYD, B. (2006) *Queensland Drug Trends 2005: Findings from the Illicit Drug Reporting System (IDRS)*. Sydney, National Drug and Alcohol Research Centre, University of New South Wales.
- MCKETIN, R., MCLAREN, J. & KELLY, E. (2005) *The Sydney methamphetamine market: patterns of supply, use, personal harms and social consequences*. NDLERF Monograph No. 13. Sydney, National Drug and Alcohol Research Centre, University of NSW.
- NATIONAL CENTRE FOR CLASSIFICATION IN HEALTH (1998) *The International Statistical Classification of Diseases and Related Health Problems, 10th Revision, Australian Modification*, Sydney, National Centre for Classification in Health.
- NATIONAL CODING CENTRE (1996) *Australian Version of the International Classification of Diseases, 9th Revision, Clinical Modification (ICD-9-CM)*, Sydney, National Coding Centre.
- ROXBURGH, A., DEGENHARDT, L. & BREEN, C. (2004) *Changes in patterns of drug use among injecting drug users following a reduction in the availability of heroin in New South Wales, Australia*. *Drug and Alcohol Review*, 23, 287-294.
- SHEARER, J., JOHNSTON, J., KAYE, S., DILLON, P. & COLLINS, L. (2005) *Characteristics and dynamics of cocaine supply and demand in Sydney and Melbourne*. NDLERF Monograph No. 14. Sydney, National Drug and Alcohol Research Centre, University of NSW.
- STAFFORD, J., DEGENHARDT, L., BLACK, E., BRUNO, R., BUCKINGHAM, K., FETHERSTON, J., JENKINSON, R., KINNER, S., NEWMAN, J. & WEEKLEY, J. (2006) *Australian Drug Trends 2005: Findings from the Illicit Drug Reporting System (IDRS)*. Sydney, National Drug and Alcohol Research Centre, University of New South Wales.