

## Epidemiology of Opioid Use in Tasmania

*In this section you will...*

- *Gain an overview of opioid use and the associated risks to individuals and the community;*
- *Obtain specific Tasmanian statistics in relation to opioid use and prescription rates; and*
- *Acquire information on mortality related to the use of pharmaceutical opioids in Tasmania.*

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## I Epidemiology of Opioid Use in Tasmania

### I.1 Overview

Long acting oral forms of opioid analgesics have been increasingly used in Australia since the early 1990s for the treatment of persistent non-malignant pain, such as back pain (The Royal Australian College of Physicians, 2009). Examples of these analgesics include morphine, oxycodone, Physeptone, and methadone syrup. Persistent pain is very common in the community and prescription of opioid analgesics has increased substantially since 1992, both nationally and in Tasmania (RACP, 2009). In Australia between 1990 and 2006, there was a 40 fold increase in oral morphine supply, and between 1990 and 2003, there was a 4 fold increase in oxycodone supply (RACP, 2009).

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While these increases in prescription rates have contributed to better management of pain, prescription opioid analgesics are highly addictive and can lead to opioid dependence (RACP, 2009). Opioid dependence is a persistent, relapsing condition, requiring substantial and costly treatment (van den Brink & Hassen, 2006). Furthermore, the risks associated with opioid dependence can significantly impact on the biological, psychological, and social health of individual patients, their family, and the community.

Some of the widely documented risks associated with opioid dependence include:

- premature death in comparison to non using peers, including:
  - death through intentional or unintentional overdose;
  - death through intentional or unintentional combination with other drugs;
  - death due to inappropriate mode of administration;
- damage to, or loss of limbs due to complications arising from intravenous administration of oral preparations;
- transmission of blood-borne viruses such as HIV, Hepatitis B and C;
- localised and systemic infections, such as septicaemia, due to injection practices;
- motor vehicle, domestic, and workplace accidents;
- diversion of prescription opioids to the illicit market;

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- unemployment;
- forensic issues; and
- socio-economic disadvantage

Finally, alcohol and benzodiazepines are often implicated in opioid related deaths, making the combination of alcohol and prescription or illicit opioids a particularly risky behaviour.

## 1.2 The Tasmanian perspective

Traditionally, very little heroin use has been reported in Tasmania. The 1998 to 2007 National Drug Strategy Household Surveys (NDSHS) (AIHW, 1999, 2002a & b, 2005a & b & 2008a & b) reported between 0.1 and 0.5% of the Tasmanian population had used heroin in the 12 months preceding the interview. Over the same period, between 0.2 and 0.8% of the national population had used heroin in the preceding 12 months.

Amongst participants in the Illicit Drug Reporting System (IDRS), an annual study monitoring drug use trends amongst people who inject drugs (PWID), heroin use in Tasmania was uncommon. Between 2004 and 2010, 5 to 19% of the samples reported use of heroin in the six months preceding the interview, compared with 56 to 69% nationally. In addition, data from the Tasmanian Needle and Syringe Program (NSP) show 0.4 to 1.1% of transactions between 2003/04 and 2009/10 were for heroin (de Graaff & Bruno, 2011). Treatment episodes in Tasmania noting heroin as the principal drug of concern also remained very low over this period, with less than 1% reported between 2003/04 and 2008/09; notably lower than the national rate in 2008/09 (10.3%) (Australian Institute of Health and Welfare, 2004-2010).

In jurisdictions where there has been an extended period of low availability of heroin – such as Tasmania and the Northern Territory – higher rates of pharmaceutical opioid use have been reported (Degenhardt et al., 2006). According to the 2001 to 2007 NDSHS reports (AIHW, 2002a & b, 2005c & 2008 a & b), between 0.4 and 0.7% of the Tasmanian population reported use of a pharmaceutical opioid in the preceding 12 months (excluding heroin and methadone), whilst nationally, this rate was between 0.2 and 0.3% of the population. In the 2004 to 2010 IDRS surveys, the rates of Tasmanian participants reporting use of pharmaceutical opioids such as morphine and oxycodone were higher than reported for the national samples of these studies (Stafford & Burns, 2011). In addition, in 2008/09, 6.4% of treatment episodes noted morphine as the principal drug of concern, whereas nationally this rate was just 1.4% (AIHW, 2010).

Multiple data sources indicate that use of heroin in Tasmania is relatively uncommon, whilst use of pharmaceutical opioids is more widely reported. Therefore, this document will focus on issues associated with pharmaceutical opioids. While much of the information regarding diagnosis and treatment of heroin and pharmaceutical opioids will overlap, further information regarding treatment and management of heroin dependence can be found in O'Brien (2004).

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### **1.2.1 Prescription rates**

Increases in rates of prescriptions for pharmaceutical opioids have been noted in both Tasmania and Australia, however, there has been considerable variability. The rate of Tasmanian consumption of morphine per 1,000 persons was consistently 110% or more of the national average between 1991 and 2007. In 2008 and 2009, the Tasmanian consumption rate decreased, resulting in the local rate matching the national rate (de Graaff & Bruno, 2011).

Both national and Tasmanian prescription rates for oxycodone have increased substantially since 2000. This increase has been particularly rapid in Tasmania, with an eight-fold increase occurring between 2000 and 2009. In 2009, consumption of oxycodone in Tasmania was similar to the national rate (109% of the national average) (de Graaff & Bruno, 2011).

Tasmanian prescription rates per 1,000 persons for methadone syrup have been consistently below the national rate (with the exception of 2003), however prescription rates for the tablet form of methadone (Physeptone) have been consistently above 200% that of the national average since 1995. Indeed, evidence from the PSB and ADS clinical reviews suggests that methadone tablets are regularly prescribed to patients under the PSB who would be more appropriately managed on the Tasmanian Opioid Pharmacotherapy Program (OPP). When combining trends for both forms of methadone, consumption per 1,000 persons in Tasmania remained above that of the Australian rate between 2003 and 2007. In the subsequent two years this trend was reversed: in 2009 the Tasmanian rate was below the national rate (88%) (de Graaff & Bruno, 2011).

### **1.2.2 Mortality related to use of pharmaceutical opioids**

Of particular concern is the number of opioid-related deaths in Tasmania. In 2007, the PSB identified 33 deaths associated with opioid use or misuse. A review conducted by McKeown (2005) identified 86 prescription opioid-related deaths between 2001 and 2005 in Tasmania. The average age of death was 38.6 years; thus many of these people died well before experiencing significant age-related health factors. Furthermore, the Tasmanian Coroner confirmed concurrent use of benzodiazepines in many of these cases. Finally, factors associated with drug-seeking behaviour or drug dependence (including alcohol) were present in all of the deaths.

While many patients appropriately access opioids through their prescribing doctors, there is clinical and anecdotal evidence, from the IDRS and reports to ADS staff in Tasmania, that many pharmaceutical drugs are also being diverted and traded illicitly.

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According to anecdotal evidence provided to ADS staff, some of these drugs are being sourced from patients' primary GPs. This creates dilemmas for doctors in deciding which patients are suitable for, and may benefit from, prescription opioids, and which patients are at risk of diverting or using these opioids in a manner in which they were not prescribed. While this dilemma is not unique to the prescription of opioids, it does indicate that thorough guidelines and recommendations for the prescription of opioids are required.