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Pharmaceutical drug misuse in Australia

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SUMMARY

The pattern of substance misuse changes over time as the types and availability of illicit and pharmaceutical drugs change.

The number of psychoactive drugs and formulations available in Australia has increased substantially in recent years. Increasing exposure puts individuals at risk of dependence and may escalate use and harm, especially for the more vulnerable such as those with a history of mental health problems or substance abuse disorder.

A new, hidden population dependent on prescribed or over-the-counter medicines is emerging.

The National Pharmaceutical Drug Misuse: Framework for Action has been developed and includes a system to coordinate the safe supply of pharmaceutical drugs subject to misuse.

Introduction

There are many prescription drugs that are misused, including growth hormones and anabolic steroids. However, opioids and benzodiazepines are among the most commonly misused drugs. Apart from those deliberately seeking hedonic drug effects, vulnerable individuals may use substances including psychoactive prescription drugs to make themselves feel better.[1] This new, hidden population[2] may differ from the usual drug user stereotypes and be more highly functioning, have higher socioeconomic status, better education and more social support.

Misuse of prescription opioids

This has become a serious problem in the USA[3] and Canada[4] as the supply of prescription opioids has increased in those countries. There is evidence that a similar problem is developing in Australia. Between 1997 and 2012, oxycodone and fentanyl supply increased 22-fold and 46-fold respectively. Oxycodone is now the seventh leading drug prescribed in general practice. The number of opioid prescriptions subsidised by the Pharmaceutical Benefits Scheme (PBS) increased from 2.4 million in 1992 to 7 million in 2007.

Most people entering Australian alcohol and drug treatment describe unsanctioned use of prescription opioids and benzodiazepines in the preceding four weeks.[5] DirectLine, a Victorian telephone alcohol and drug counselling service, now receives more calls about prescription opioids (31%) than heroin (12%).[6] Many people detained by police test positive for benzodiazepines and prescription opioids.
In needle and syringe programs, the number of people who report that the last drug injected was a pharmaceutical opioid increased from 7% in 2000 to 27% in 2010. Heroin was the main drug injected at the Sydney Medically Supervised Injecting Centre until 2009. Monthly visits for injections of crushed and dissolved prescription opioid tablets (4000) now exceed those for heroin (1200).[7]

Poisons information centres and ambulance data from Victoria report increasing prescription opioid problems. An increasing proportion of patients seeking medically-assisted treatment for opioid dependence nominate pharmaceutical opioids as their primary drug of concern. In the late 1990s, heroin predominated as the cause of hospitalisations due to opioid poisoning, but by 2007–08 prescription opioids accounted for 80% of these admissions. The number of overdose poisoning deaths involving prescription drugs now exceed those from road trauma in Victoria[8] and the USA.[9]

Risks to the community include increased healthcare costs, criminal activity around diversion and trafficking of psychoactive drugs. Pharmaceutical drug crime includes crime to obtain the drugs, and crime resulting from intoxication. Drug seekers may present with fraudulent complaints to multiple doctors and pharmacies without telling each prescriber about the other. Street prices for prescription opioids are similar to those for illicit drugs. Forged prescriptions and identity fraud are used, and armed robbery of pharmacies is a problem. Patients may also share or on-sell their medication.

Opioids

Removal of pethidine from the PBS – because of norpethidine neurotoxicity, misuse liability and self-administration by health practitioners – has limited

drug-seeking for this drug. However, misuse of other pharmaceutical opioids is increasing in parallel with their increasing availability. PBS-subsidised opioids increased from four opioids and 11 preparations in 1992 to eight opioids and 70 formulations in 2007.[10]

Despite large increases in opioid consumption between 1995 and 2007–08, the proportion of adults reporting pain during the last four weeks increased from 57% to 68%, and severe or very severe pain increased from 7% to 10%.[11] Evidence supporting opioid treatment of chronic non-cancer pain is limited, but evidence of serious harm for patients and the community is increasing.

Risks of opioid use

As more people are exposed to prolonged opioid treatment for chronic non-cancer pain, evidence about the harms is increasing. Risks include hyperalgesia, immunosuppression, neuroendocrine dysfunction causing hypogonadism, decreased libido, erectile dysfunction, osteoporosis, increased fracture risk, dental decay and tooth loss due to xerostomia, opioid-related bowel disorder, sedation, cognitive impairment and overdose death.

As many as 36% of patients on opioid therapy meet criteria for lifetime opioid dependence.[12] Childhood opioid poisoning has increased with greater opioid availability in homes and the community.

People taking more than 100 mg morphine or equivalent per day are at greater risk of overdose and death than those on lower doses. However, most people are prescribed low doses and this is where most of the deaths occur. For doses above 100 mg per day, guidelines recommend a review of pain management or referral for specialist advice.

Combination analgesics containing codeine

People dependent on non-prescription over-the-counter analgesics combining codeine with ibuprofen, aspirin or paracetamol may escalate their daily dose to 30–60 or more tablets a day.[13] Harm from high doses of ibuprofen or paracetamol secondary to codeine addiction causes serious morbidity and in some cases death. Practitioners should consider this possibility in patients presenting with the following conditions:

- upper gastrointestinal tract ulcer, haemorrhage and perforation
- non-steroidal anti-inflammatory drug enteropathy with small and large bowel strictures, ulcers mimicking Crohn's disease
- renal tubular acidosis and renal failure
- severe hypokalaemia
- anaemia
- hypoalbuminaemia from protein-losing enteropathy
- liver failure.

Other psychoactive drugs

Benzodiazepines and antipsychotics are also subject to misuse. Moving flunitrazepam to Schedule 8, and removing temazepam capsules from the market because of gangrene from injection of their liquid contents, has eased misuse problems. Now alprazolam has become a particular problem requiring rescheduling to Schedule 8.

Benzodiazepines in combination with other drugs can make overdose from drug toxicity worse. Withdrawal is potentially dangerous, and cessation of prolonged treatment is difficult. In many cases non-drug treatment for insomnia or psychiatric conditions is equally effective and the benefits more enduring than treatment with benzodiazepines.

Quetiapine and olanzapine are also subject to misuse and trafficking, as are dexamphetamine and methylphenidate which are used to treat ADHD.

Response from prescribers and pharmacists

Opioids (except codeine and tramadol) are restricted on the PBS for 'severe disabling pain not responsive to non-narcotic analgesics'. Their use to treat acute pain and cancer pain is well accepted, but there is limited evidence concerning long-term efficacy and safety for chronic non-cancer pain. *Australian Prescriber*,[14,15] NPS MedicineWise,[16] Therapeutic Guidelines[17] and the Hunter Integrated Pain Service[18] provide advice about the use of opioids. Guidance about benzodiazepine prescribing is also available.

Opioid injections are usually contraindicated if the patient can swallow, as the rapid onset of hedonic effect after an injection is highly reinforcing of drug misuse. Pethidine is highly addictive and chronic injection causes myofibrosis.

A cautious approach is warranted given the risks of serious outcomes for the individual and the community. There are numerous guidelines for managing chronic non-cancer pain, back pain, anxiety and insomnia, but they are often not followed.

Information sources for prescribers

A National Pharmaceutical Drug Misuse Framework became available early in 2014.[19] It includes a recommendation for a real-time system to coordinate drug supply, and enable more informed decisions

about the safety of supply of prescription and over-the-counter codeine analgesics with potential for misuse. In the meantime contact the Prescription Shopping Program or the state and territory drugs and poisons contacts (Box).

Box Information about drug-seekers

The Medicare Australia Prescription Shopping Program provides information about people seeking Pharmaceutical Benefits Scheme drugs:
phone 1800 631 181
www.medicareaustralia.gov.au/provider/pbs/prescription-shopping

Contacts for state and territory drugs and poisons units:
www.tga.gov.au/industry/scheduling-st-contacts.htm

Conclusion and recommendation

Treating and assessing pain in patients with a history of substance misuse is high risk and complicated for both patients and their doctors. Referral to a pain or addiction specialist may be needed, particularly if there is a history of substance misuse. Opioid prescribing may be contraindicated, or alternatively, special arrangements and consultation may be required if there is concern about misuse, or examination suggests current injecting drug use.

Supply should only occur after a thorough assessment of need and risk, and in the context of a comprehensive management plan that may include drugs other than those subject to misuse, together with non-drug treatment approaches.

The content and opinions in this article do not necessarily represent the opinions of the organisations with which the author is affiliated.

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REFERENCES

1. Harris KM, Edlund MJ. Self-medication of mental health problems: New evidence from a national survey. Health Serv Res 2005;40:117-34.
2. Nielsen S, Bruno R, Lintzeris N, Fischer J, Carruthers S, Stoové M. Pharmaceutical opioid analgesic and heroin dependence: How do treatment-seeking clients differ in Australia? Drug Alcohol Rev 2011;30:291-9.
3. Office of National Drug Control Policy (ONDCP). Epidemic: Responding to America's Prescription Drug Abuse Crisis. Washington DC, USA: Executive office of the President of the United States; 2011.
4. Avoiding Abuse, Achieving a Balance. Tackling the Opioid Public Health Crisis. Toronto, Canada: College of Physicians and Surgeons of Ontario; 2010.
5. Nielsen S, Bruno R, Degenhardt L, Stoove MA, Fischer JA, Carruthers SJ, et al. The sources of pharmaceuticals for problematic users of benzodiazepines and prescription opioids. Med J Aust 2013;199:696-9.
6. Cogger S, Dietze P, Lloyd B. Victorian Drug Trends 2012. Findings from the Illicit Drug Reporting System (IDRS). Australian Drug Trends Series No. 94. Sydney: National Drug and Alcohol Research Centre, University of New South Wales; 2013.
7. Jauncey M. Sydney Medically Supervised Injection Centre (MSIC): Yearly trends and frontline issues. Presentation at the 2012 National Drug Trends Conference. https://ndarc.med.unsw.edu.au [cited 2014 Apr 17]
8. Dwyer J. Coroners Court of Victoria. Coroners Prevention Unit. Drug overdose deaths in Inner North West Melbourne. Presentation to Yarra Drug Health Forum on pharmaceutical misuse. 2013.
9. Centers for Disease Control and Prevention. National Center for Health Statistics. NCHS Fact Sheet. NCHS Data on Drug Poisoning Deaths. Atlanta, GA: CDC; 2012. www.cdc.gov [cited 2014 Apr 17]
10. Leong M, Murnion B, Haber PS. Examination of opioid prescribing in Australia from 1992 to 2007. Intern Med J 2009;39:676-81.
11. Australian Bureau of Statistics. Characteristics of bodily pain in Australia. 4841.0 - Facts at your Fingertips: Health. 2012. www.abs.gov.au [cited 2014 Apr 17]
12. Boscarino JA, Rukstalis M, Hoffman SN, Han JJ, Erlich PM, Gerhard GS, et al. Risk factors for drug dependence among out-patients on opioid therapy in a large US health-care system. Addiction 2010;105:1776-82.
13. Frei MY, Nielsen S, Dobbin MD, Tobin CL. Serious morbidity associated with misuse of over-the-counter codeine-ibuprofen analgesics: a series of 27 cases. Med J Aust 2010;193:294-6.
14. McDonough M. Safe prescribing of opioids for persistent non-cancer pain. Aust Prescr 2012;35:20-4.
15. Cohen ML. Principles of prescribing for persistent non-cancer pain. Aust Prescr 2013;36:113-5.
16. NPS MedicineWise. Opioids – a planned approach to prescribing opioids for persistent non-cancer pain. NPS News 69. 2010. www.nps.org.au [cited 2014 Apr 17]
17. Analgesic Expert Group. Therapeutic Guidelines: analgesic. Version 6. Melbourne: Therapeutic Guidelines Limited; 2012. www.tg.org.au [cited 2014 Apr 17]
18. Hunter Integrated Pain Service. Reconsidering opioid therapy: A Hunter New England perspective. NSW Government. Health. Hunter New England Local Health District. 2014. www.hnehealth.nsw.gov.au [cited 2014 Apr 17]
19. Australian Government National Drug Strategy. National pharmaceutical drug misuse: Framework for action (2012-2015): a matter of balance. 2014.

FURTHER READING

Von Korff M, Kolodny A, Deyo RA, Chou R. Long-term opioid therapy reconsidered. Ann Intern Med 2011;155:325-8.

Kissin I. Long-term opioid treatment of chronic nonmalignant pain: unproven efficacy and neglected safety? J Pain Res 2013;6:513-29.

Roberts LJ. Managing acute pain in patients with an opioid abuse or dependence disorder. Aust Prescr 2008;31:133-5.