

Drug diversion

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Key words

benzodiazepines, drug
dependence, opioids,
prescription drug diversion

Aust Prescr 2015;38:164–6

SUMMARY

Prescription drug diversion has significant health, legal and social implications. Deaths from misuse of prescription drugs account for a significant proportion of overdose deaths.

The drugs most commonly involved are analgesics, particularly opioids, and psychoactive drugs, particularly benzodiazepines.

Diverted drugs are most often sourced from a family member or friend, but are also sourced from overseas pharmacies or laboratories, or bought from drug dealers.

Drug diversion can be mitigated by good prescribing practices. Systems for monitoring the prescribing and dispensing of medicines are being instituted across Australia.

Introduction

Prescription drug diversion is defined as the unlawful channelling of regulated pharmaceuticals from legal sources to the illicit marketplace.¹ This includes transferring drugs to people they were not prescribed for.

Scope

The diversion of prescription drugs has been a problem in Australia and globally for over 25 years. The impacts extend across many areas, from incarcerations of people under the influence of prescription drugs² to confrontation and conflict in healthcare settings. This leaves healthcare professionals unsupported when managing patients who may be misusing prescriptions.

Among the most concerning manifestations of drug diversion is the increasing number of overdose deaths related to prescription pharmaceuticals. It is difficult to quantify exactly how many deaths result from drug diversion as opposed to complications arising from prescribed use. A study published from coronial data looked specifically at whether oxycodone detected on post-mortem analysis was known to be prescribed to the deceased. It found that only 39% had a legitimate prescription for oxycodone.³

Quantifying the extent of the problem is difficult. It has been shown that, for opioids, diversion is proportional to the number of prescriptions issued without supervised dosing and inversely proportional to the availability of heroin.⁴ Concerningly, the number of opioid dispensings in Australia increased from 500 000 in 1992 to 7.5 million in 2012.⁵

Data from needle and syringe programs show the proportion of users reporting the injecting of pharmaceutical opioids increased from 9% in 2005 to 16% in 2009.⁶ Diverted pharmaceuticals are

taken alone or combined with alcohol or other illicit recreational drugs such as cannabis.

The pharmacological properties of a drug influence its desirability on the illicit market. Drugs with a rapid onset of effect and those that produce greater effects from a single tablet are more desirable, for example a single 2 mg alprazolam will produce a similar effect to four 5 mg tablets of diazepam.⁷ Other commonly diverted drugs are listed in the Table.

Points of diversion

The sources of diverted pharmaceuticals are difficult to evaluate. Diversion can occur at any point along the supply chain, although the most common point is at or beyond the point of practitioner–patient interface. Primary health care is the main target in prescription drug diversion, although drugs provided on hospital discharge can be diverted or used to influence ongoing prescribing by the GP.

Table Commonly diverted drugs

Class	Drugs
Benzodiazepines	all
Opioids	all
Stimulants	dexamphetamine pseudoephedrine methylphenidate
Antipsychotics	olanzapine quetiapine
Anaesthetic drugs	ketamine propofol
GABA agonists	gabapentin pregabalin

Studies of prison inmates' self-reported use in the year before incarceration found that 21% obtained prescriptions directly from a doctor in their name and 43% had been given them by a friend or family member. Other sources were drug dealers, and purchasing from friends or family. Only a small number of inmates reported forging or stealing scripts.² A similarly small number of prescription drugs are obtained through forced entry into pharmacies, warehouses and laboratories. There are scattered reports of prescription drugs being salvaged from clinical waste (sharps bins), diverted by healthcare workers within hospitals and sourced illicitly from patients in aged-care facilities, but the proportion they contribute to diversionary use is difficult to quantify.

One study in the USA found that the primary sources of prescription drugs on the street included older people and patients with chronic pain.⁷ Obtaining drugs via the internet from overseas vendors is becoming more frequent, with quantities seized by Australian customs doubling over the past four years.⁸

Prevention strategies

Limiting the misuse and diversion of prescription drugs requires a coordinated approach between regulatory bodies, governments, pharmacies and individual prescribers. There are several guidelines aimed at reducing prescription drug diversion.

The National Pharmaceutical Drug Misuse Framework for Action is a strategy that was developed in response to the rising misuse of prescription opioids.⁹ This aims to improve the quality use of medicines and reduce potential misuse. It addresses several key areas including improved systems for medication management, greater support for prescribers and pharmacists, education and improvement of health literacy, harm reduction and improved regulation.

Drug monitoring

A key element of the Framework is the Electronic Recording and Reporting of Controlled Drugs system. Introduced in 2012, it is currently only in use in Tasmania, but plans are in place to extend it nationally. The aim of the medication monitoring system is to provide prescribers and pharmacists with real-time access to information on prescriptions of controlled substances.

Currently, Medicare runs a Prescription Shopping Information Service* that can be accessed by registered prescribers without patient consent. Its

limitations are that it only identifies patients who present to more than five prescribers, or obtain in excess of 50 prescriptions or 25 restricted items in a three-month period. Other monitoring systems are in place, but require patient consent and are retrospective in nature. With patient consent, the exact number of prescriptions can be tracked from all prescribers, yet the reports issued to the requesting physician only reflect the previous three months of prescription use.

Drug monitoring systems have their shortcomings and their effectiveness in limiting drug diversion is the subject of national and international debate.¹⁰ However, they can be viewed as one element of a coordinated approach to support prescribers.

Reformulation of pharmaceuticals at risk of diversion

Reformulation of a drug into an abuse-deterrent preparation is a strategy that has been adopted to mitigate the diversion of pharmaceuticals. The primary aim of reformulation is to prevent the intravenous use of oral preparations. Temazepam was previously available in gel caps and tablets. The gel caps were deemed easier to inject than the tablet formulation and they were withdrawn from the market in 2004 following numerous reports of abscesses, thrombophlebitis and cellulitis associated with their use.

A tamper-resistant formulation of oxycodone was introduced in Australia in 2014, several years after it was introduced in the USA. At this preliminary stage, there are conflicting reports on whether this has stemmed the misuse of one of the most commonly diverted opioids or simply shifted use to other formulations. Early findings from the National Opioid Medication Abuse Deterrence study show a decline in pharmacy sales of oxycodone 80 mg following the introduction of the abuse-deterrent formulation.¹¹ Previously this was the most commonly diverted dose by people who inject drugs. In addition, there are various means of overcoming the tamper-resistant formulation to facilitate intravenous use.

Training

Improved training of doctors in identifying and treating addiction has been acknowledged as a key area in minimising pharmaceutical diversion. Specialist bodies such as the Royal Australasian College of Physicians and the Royal Australian College of General Practitioners have policies guiding good prescribing practices for drugs of dependence. To overcome the limited exposure to addiction training, a system of prescriber credentialing has been suggested. This already exists in some states, such as the NSW Opioid Treatment Accreditation course, but is mostly directed towards prescribing in the context of opioid treatment programs.

* Prescription Shopping Information Service
1800 631 181

Good prescribing practice

There are several measures that health professionals can put in place to minimise drug diversion. The first is to seek to identify current or previous addictive behaviours in all patients to whom potentially addictive drugs are prescribed.

Good prescribing practice involves an assessment of the indication for the drug, a discussion of its adverse effects, an appraisal of functional status, and constructing realistic expectations in the form of a treatment agreement, before prescribing. These precautions also emphasise regular review and defined treatment periods with the aim of identifying any potential misuse or diversion during treatment.¹² Such principles can be extended to any drug with the potential for misuse.

The Box lists other practice points to identify misuse and minimise diversion.¹³

Conclusion

The diversion of prescription pharmaceuticals is a recognised problem with severe adverse consequences. Importantly, the source of most diversion appears to be at the level of the patient–prescriber interaction or after the prescription is dispensed. The diversion of drugs within healthcare settings constitutes a much smaller proportion of overall drug diversion, but holds significant risks for both patient and healthcare provider.

Various organisations have developed plans to address the problem and there is a push toward improvements in drug monitoring systems. There is a need for more awareness and specialised training in the area of addiction to ameliorate drug diversion. Meanwhile there is a range of actions health

professionals can take to combat medication misuse and achieve the quality use of medicines. <

Conflict of interest: none declared

Box Strategies to reduce drug diversion¹³

Limit forged and illicit scripts

Ensure tamper-resistant scripts are written and all prescription paper is kept secure.

Prescriber–pharmacist interaction

Communicate with pharmacists about exact quantities to be prescribed and enquire as to the possibility of concerns regarding drug-seeking behaviour.

Limit quantities of medication dispensed

Mandate restricted dispensing (i.e. issue of a daily or weekly supply) in cooperation with a pharmacy.

Local policy

Develop a local policy on prescribing drugs of addiction to new patients.

Adhere to legislation

Ensure prescriptions for patients recognised to be drug dependent are registered with the relevant state governing body.

Refer to treatment

Use the support of drug and alcohol or chronic pain services as part of a treatment agreement for patients who demand an increasing number or frequency of scripts.

Enforce treatment boundaries

In response to violent or threatening behaviour, terminate treatment and involve senior clinicians or management. Further advice on management can be accessed via local addiction services.

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