



Over-the-counter and prescription medicine misuse in Cape Town — findings from specialist treatment centres

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Objective. To provide community-level public health surveillance information on over-the-counter (OTC) and prescription medicine misuse.

Methods. A retrospective study of OTC and prescription medicine misuse among 9 063 patients from 23 specialist substance abuse treatment centres in Cape Town, South Africa, between 1998 and 2000.

Results. OTC and prescription medicine misuse places a burden on health and social services in South Africa. This is evidenced through the constant demand for treatment for OTC/prescription medicine misuse. Benzodiazepines are the class of medicines for which users most often receive treatment, followed by analgesics. Analgesic misuse is most often accounted for by the use of codeine-containing medicines, many of which are available over the counter.

Patients using OTC/prescription medicines as their primary drug of abuse are significantly more likely to be female, and aged over 40 years. In contrast, patients using OTC/prescription medicine as an additional drug of abuse tend to be male and over 40 years of age.

Conclusions. This study points to the need to develop primary health care protocols for detection, management and referral of patients misusing OTC/prescription drugs and the need to debate the re-scheduling of codeine as a prescription-only substance. The study also points to the need for further community-based research on the nature and extent of OTC/prescription drug misuse among the general population.

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Health researchers have, to a large extent, neglected the issue of over-the-counter (OTC) and prescription medicine misuse. As a result, there is little available information on the global prevalence of licit medicine misuse. (Prescription/OTC medicine abuse/misuse refers to use for reasons not medically indicated, in doses higher than recommended or for a longer than recommended duration to achieve a psychoactive effect.) Although many OTC and prescription medicines have the potential to be misused, prescription benzodiazepines and OTC/prescription analgesics are two of the most widely misused classes of medicines.

Globally, benzodiazepines are among the most commonly prescribed medicines. When used appropriately, these sedative-hypnotics are effective in treating a range of medical conditions.¹ However, the misuse of benzodiazepines is widespread, with the 1998 National Household Survey on Drug Abuse (NHSDA)² reporting a lifetime prevalence of 5.6% for benzodiazepine misuse among Americans aged 12 years or older. Benzodiazepine misuse may result in transient side-effects, including psychomotor retardation, cognitive dysfunction, disinhibition, and emotional blunting.¹ The misuse of benzodiazepines together with other central nervous system

(CNS) depressants places the user at risk of overdose and death.¹ In addition, a long-term consequence of benzodiazepine misuse is psychological and physiological dependence, manifest in a distinctive benzodiazepine withdrawal syndrome.³

Both prescription and OTC analgesics have widespread application in the treatment and management of pain. However, evidence points to the widespread misuse of these substances, with the 1998 NHSDA reporting a lifetime prevalence of 5.3% for the non-medical use of prescription analgesics among Americans aged 12 years or older.² Prescription and OTC analgesics can be broadly grouped into one of two categories: opioid analgesics (e.g. morphine and codeine) and non-narcotic analgesics. Opioid analgesics act as CNS depressants, hence large doses may result in respiratory suppression, seizures, coma, and potentially death. A long-term health outcome of opioid analgesic misuse is psychological and physical dependence.⁴ The chronic misuse of non-narcotic analgesics is associated with analgesic-induced headaches,⁵ gastrointestinal problems,⁴ analgesic nephropathy, and atherogenesis that may result in premature mortality.⁶

Despite the abuse potential of OTC and prescription medications documented by prospective studies of the general populations in countries like the USA, there is little research describing the prevalence of OTC/prescription medicine misuse in South Africa. The aim of this paper is to begin to address this gap by providing retrospective, community-level public health surveillance information on OTC/prescription

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medicine misuse among people attending specialist substance abuse treatment facilities in Cape Town.

Method

As part of the South African Community Epidemiology Network on Drug Use (SACENDU) project, data on OTC and prescription medicine misuse are collected biannually from 23 specialist substance abuse treatment centres in Cape Town.⁷ These sites represent at least 95% of the specialist treatment centres in Cape Town. Treatment centres include state-funded, private, and non-government institutions. A standardised one-page form is completed on each person treated by a given centre during a particular 6-month period. The form elicits biographical information as well as information on the types of substances abused and patterns of substance abuse. Regular training in data collection procedures is given to staff at treatment centres. To ensure data quality, completed forms are checked for missing information and possible miscodes.

Of the 9 063 forms collected over 6 collection periods between 1998 and 2000, those referring to OTC/prescription medicine as drugs of abuse were selected for further analysis. Using the *South African Medicines Formulary*,⁸ all

OTC/prescription medicine mentions were re-coded as benzodiazepines, analgesics, slimming preparations, or unspecified medicines. Medicines coded as analgesics were further coded as codeine-containing, other opioid, or unspecified medicines. Each form represents a single treatment episode for a specific person.

Results

From 1998 to 2000, 710 (7.8%) of the 9 063 cases recorded by specialist treatment centres in Cape Town reported OTC, prescription, or unspecified medicines as the primary or secondary substance(s) of abuse (Fig. 1).

OTC/prescription medicines as primary substances of abuse

OTC and prescription medicines were reported as primary substances of abuse by 239 (2.6%) of the 9 063 cases. Of these 239 cases, 111 (46.4%) reported benzodiazepines and 107 (44.8%) reported analgesics as their primary substances of abuse (Fig. 1).

Significantly more females than males reported abusing OTC/prescription medicine as their primary drug of abuse (χ^2

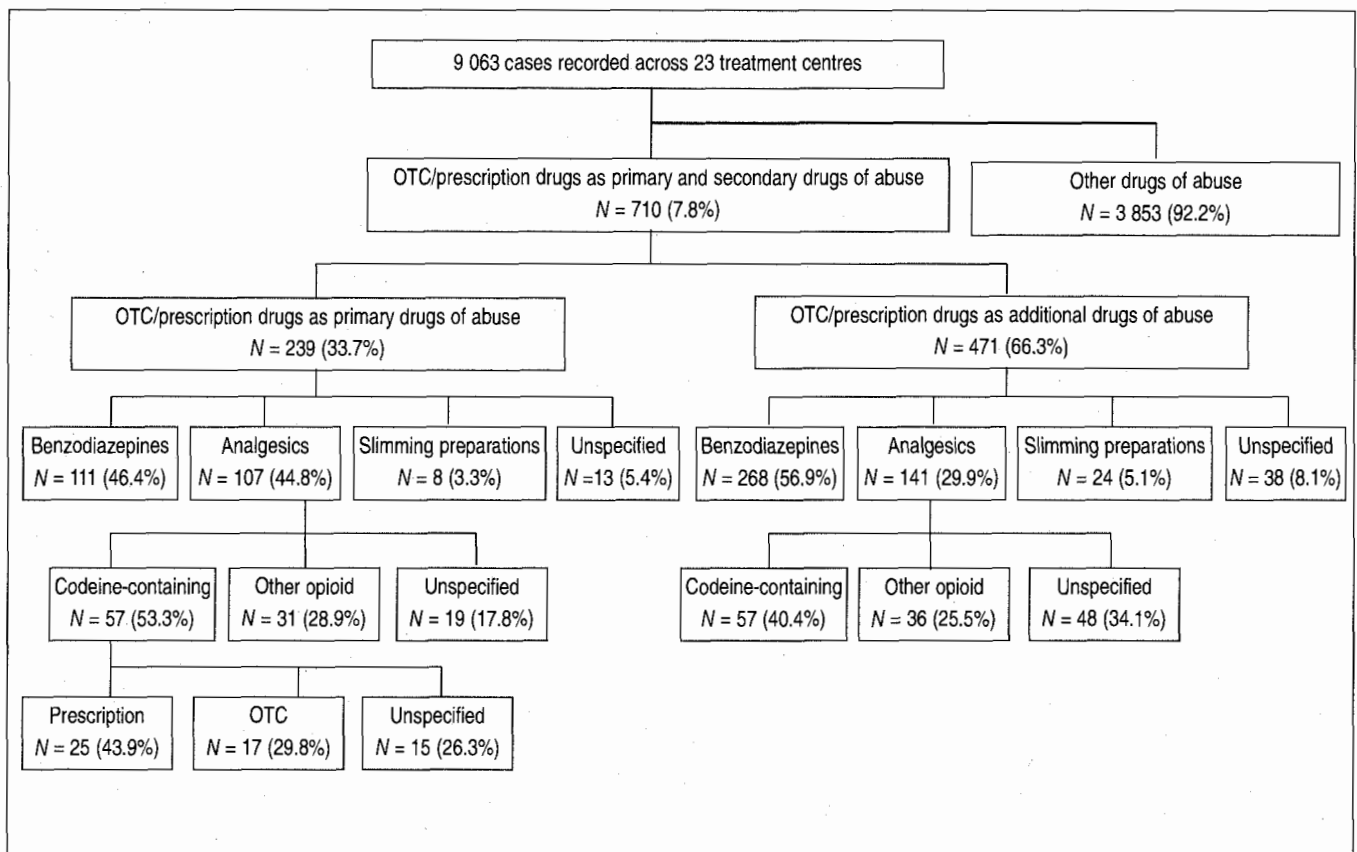


Fig. 1. OTC and prescription drug misuse in Cape Town, 1998 - 2000.



= 4.648, $p = 0.031$). Of the 111 patients reporting benzodiazepines as their primary substance of abuse, 74 (66.7%) were female. Similarly, of the 107 people citing analgesics as their primary substance of abuse, 56 (52.3%) were female. Some 63 (57.2%) of the 111 patients reporting benzodiazepines as their primary drugs of abuse, and some 41 (38.6%) of the 107 people reporting analgesics as their primary drug of abuse, were older than 40 years of age.

Among the 107 people reporting analgesics as their primary drug of abuse, 57 (53.3%) abused codeine-containing preparations, of which 43.9% were prescription, 29.8% were OTC, and 26.3% were unspecified medicines. Other opioid analgesics were misused by 28.9% of the patients within this group, of which all were prescription medicines (Fig. 1).

OTC/prescription medicines as secondary substances of abuse

OTC/prescription medicines were cited as secondary substances of abuse by 471 (5.2%) of the 9 063 cases. Benzodiazepines were the most frequently reported licit medicines misused, followed by analgesics (Fig. 1). Some 62 (13.2%) of the 471 patients reported the additional misuse of other medicines that included slimming preparations, antidepressants (e.g. fluoxetine), stimulants (e.g. methylphenidate), and anaesthetics (e.g. ketamine).

Between 1998 and 2000, 174 (64.8%) of the 268 patients reporting using benzodiazepines and 88 (62.1%) of the 141 patients citing analgesics as secondary substances of abuse were male. In terms of age, 117 (43.8%) patients with benzodiazepines and 64 (45.2%) patients with analgesics as secondary substances of abuse were 40 years of age or older.

Of the 268 patients reporting benzodiazepines as their secondary substance of abuse, 154 (57.5%) cited alcohol, 38 (14.3%) cited cocaine, 15 (5.5%) reported heroin, and 15 (5.5%) cited Mandrax (methaqualone) or Mandrax smoked together with cannabis (white pipes) as their primary substance of abuse. Of the 141 patients reporting analgesics as secondary drugs, 57 (40.4%) reported the misuse of codeine-containing preparations, of which 33 (57.9%) were OTC preparations. Some 36 patients (25.5%) reported the misuse of other opioid analgesics, of which 100% were prescribed medicines (Fig. 1). Of the 114 patients reporting analgesics as their secondary substance of abuse, 53 (46.2%) cited alcohol, 20 (17.9%) cited benzodiazepines, 10 (8.3%) reported heroin, 10 (8.3%) cited cannabis, and 10 (8.3%) cited methaqualone as their primary substance of abuse.

Discussion

The findings from our study confirm that OTC/prescription medicine misuse is frequently reported among patients in substance abuse treatment settings. Compared with most illicit

drugs, OTC/prescription medicines are relatively inexpensive, and easy to procure, and possession holds no legal sanction. Many people do not perceive the inappropriate use of OTC/prescription medicines to be as problematic as the use of illicit drugs, which are thought to have greater potential to cause harm.¹ However, at least for a small proportion (2.6%) of the 9 063 cases studied in Cape Town, OTC/prescription medicine misuse was the primary problem for which patients sought substance abuse treatment services. In addition, the misuse of OTC/prescription medicines in combination with, or in addition to, a primary substance of abuse (commonly alcohol) was cited by 5% of all cases. This pattern of combining medicines with other substances is cause for concern as it is associated with serious health consequences, including coma and death.¹

Significantly more females than males reported OTC/prescription medicines as their primary substance of abuse. A partial explanation for this contrast may lie in the use of benzodiazepines to treat the high prevalence of anxiety and mood disorders among women.⁹ For many women it may also be more socially acceptable to use OTC/prescription medicines than other substances.

Consistent with findings from studies conducted in the USA and Europe,¹² benzodiazepines are the most widely misused medicines in Cape Town. Also in keeping with international findings,^{9,11} the majority of substance-abusing patients use benzodiazepines in addition to their primary drug of abuse, which is most likely to be alcohol. For these patients, benzodiazepines may be used to enhance the effect of the primary drug of abuse or to alleviate withdrawal symptoms when they are unable to source their drug of choice.¹⁰ In contrast, patients citing stimulants (e.g. cocaine) as their primary drug may use benzodiazepines as part of a stimulant/depressant cycle, to ease stimulant-withdrawal symptoms, or to soften the edge of a stimulant 'high'.¹⁰

The second most frequently reported class of medicines misused in Cape Town is OTC/prescription analgesics. Once again, this is consistent with international findings.² Codeine-containing analgesics are the most commonly misused analgesics, of which a substantial proportion are OTC medicines.

Our study provides good evidence that OTC/prescription medicine abuse places a considerable burden on the health and social services of the Western Cape. OTC/prescription medicine abuse does not receive the same media, or indeed medical, attention as illicit drugs. However, given their widespread availability and their acceptance by the broader community, OTC/prescription medicine abuse may be more harmful to society than previously thought. Clinicians, researchers and policy-makers have a responsibility to raise awareness of the problem among themselves and within the broader public. General practitioners and pharmacists may



need to be better trained to detect, manage, and refer people who misuse OTC/prescription medicines. Given the potential of codeine-containing medicines to be abused, and since codeine and similar opioid-type agents (e.g. noscapine, pholcodine) are present in numerous combination analgesics and cough suppressants available without a prescription, the issue of whether codeine-containing OTC medicines should be rescheduled needs to be considered and carefully debated. We also need to improve research efforts to describe the use of OTC/prescription medicine within the general population by conducting national household surveys and community-based studies, as data from treatment facilities are probably poor estimates of the prevalence of medicine misuse among the general population.

This study does, however, have one main methodological limitation. Given that data are derived from treatment settings only, it is possible that a selection bias may be present. More specifically, treatment centre data may reflect admission policies, differential access to services based on socio-economic status, and the limited availability of treatment services for marginalised groups rather than a fair representation of treatment demand for OTC/prescription medicine misuse by the community. In addition, as mentioned previously, it is questionable whether findings derived from the treatment context are reflective of medicine misuse in the general population. If anything, patterns of medicine misuse within

the general population would be greater than what we have observed.

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