

Research Briefing  
**Misuse of prescription and  
over-the-counter medications**

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**National Assembly for Wales**  
Research Service



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## Research Briefing

# Misuse of prescription and over-the-counter medications

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# 1. The nature of misuse

The misuse of prescription and over-the-counter medicines has arisen as a significant public health issue in recent years. The issue is different in nature to that of illicit substance misuse in several ways, and is addressed separately in the **Welsh Government's Substance Misuse Strategy**. This briefing describes the extent of the problem in Wales and summarises the action being taken to tackle it.

**Prescription-only medicines (POMs)** which are known to be associated with dependency and misuse come in four main classes:

- **Sedatives** such as benzodiazepines and newer z-drugs (chemically distinct from benzodiazepines but with a very similar method of action). Within this category, hypnotics and anxiolytics are sometimes discussed separately;
- **Antidepressants**, including selective serotonin reuptake inhibitors (SSRIs);
- **Analgesics (painkillers)**, including opioid painkillers such as morphine, tramadol and high-dose codeine; and
- **Antiepileptics**, notably pregabalin and gabapentin.

The main **over-the-counter (OTC)** drugs causing problems of dependency are compound analgesics that contain low-dose codeine in combination with another drug. Examples include co-codamol (codeine and paracetamol) and Nurofen Plus (codeine and ibuprofen).

Problematic use of POMs and OTC medicines includes **inadvertent dependence as a result of long term** use or over-prescription of the drug. Additionally, it is reported that some individuals **initially seek out the drugs for recreational use** and may later become dependent. A **study in 2009 of students and staff at a university in Wales** found that amongst those who had used a prescription drug which was not prescribed to them, the main motives for doing so were to gain therapeutic benefit and 'to get high'.

It is possible to buy a range of drugs, without need of a prescription, from unregistered online pharmacies. This is despite the ongoing work of the UK Medicines and Healthcare products Regulatory Authority to close such sites down. Research by the Royal Pharmaceutical Society found that an estimated 7% of UK adults have bought a prescription drug in this way at some point in their lives. There are indications that **diversion of medication** – medication being passed on or sold on by those to whom it has been prescribed – is a major contributor to the ease with which individuals are able to obtain POMs for non-medical use.

According to **factsheets produced by the Royal College of General Practitioners (RCGP)**,

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*[...] the risk and consequences [of misuse] vary widely and can lead to physical, psychological and social consequences for individuals, family members and local communities, affecting all age groups.*

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The stigma attached to addiction can be a barrier preventing dependent individuals from seeking help. A 2015 **review of the situation in the UK regarding opioid painkillers** stated that:

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*In the main, those suffering from opioid painkiller dependency are **not willing to attend established community drug treatment centres**, but find there are few specialist treatment options.*

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The populations at particular risk of POM and OTC dependence differ depending on drug type and are also different in their characteristics from users of 'traditional' illicit drugs. Taking **gender** as an example, use of illicit drugs is much higher in men than in women, whereas some studies have suggested that for certain POMs the balance of risk is directed more towards women. The **RACGP advises** that since '**the profile of individuals who are dependent on prescription opioids is quite different** to individuals who are dependent on illicit opioids', different treatment approaches may be necessary. There is also **evidence** to suggest that misuse of prescription drugs is more evenly distributed across age groups, instead of being concentrated in young adults. **Drug misuse in older adults is of particular concern** because of the greater risk of interactions with other medications and of complications such as falls, overdose and toxicity.

Misuse of POMs and OTC medicines is **also a problem amongst users of illicit drugs**. For example **drug treatment service providers have noted** that the use of pregabalin and gabapentin (antiepileptic medication) alongside heroin is now commonplace.

### Assessing the scale of the problem in Wales

It is difficult to estimate the country-wide scale of the problem.

One **survey** in 2009 of 1614 students and 489 staff at a university in Wales found that the lifetime prevalence of prescription drug misuse was 33% among students and 24% among staff.

The **2015 review of opioid painkiller dependency in the UK** concluded:

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*[...] there seems little doubt through the limited number of studies that have been conducted and day to day experience of clinicians that there are potentially significant numbers of people struggling with a dependency to prescription and OTC painkillers.*

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There are two types of data that are commonly available:

- **Data on drug-related deaths**, hospital admissions and referrals to drug treatment services. This data reflects part of the problem, but does not account for a large number individuals living with undetected POM and OTC drug-dependence and the social consequences of that dependence.

In 2014-15 **hospital admissions for benzodiazepine poisoning across Wales totalled 482**, compared with 1860 for opioids, 778 for cannabinoids and 148 for cocaine; and

- **Prescribing data and OTC sales data** – these are useful indicators, but it is not possible to infer what proportion of that medicine use is problematic, non-medical use.

## 2. Trends across the UK and over time

This section summarises the available data on patterns of misuse across Wales; how Wales compares to the rest of the UK; and trends over time.

### Sedatives

The most recent detailed **study on sedative prescribing in Wales** found that in **2008/09**:

- **There was a large variation in prescribing rates between Local Health Boards (LHBs);** prescribing rates in some LHBs were more than double the rates in others. There was no causal relationship between prescribing rates and multiple deprivation ranking; and
- **Prescribing rates in Wales were far higher on average than those in the North East England,** an area which is considered socio-economically similar to Wales.

**Since 2010, there has been a steady decrease in hospital admissions** involving benzodiazepines in Wales. **National Prescribing Indicators** also show that **prescribing of all hypnotics and anxiolytics decreased** by around 13% during 2013-2015. The RCGP suggest that this decrease in prescribing may be in part due to proactive medicines management of these drugs in primary care. However, in 2014, 6 of the 7 Welsh LHBs still had hypnotic and anxiolytic prescribing rates that were in the top 25% of clinical commissioning groups/health boards across England and Wales.

**Use of the newer z-drugs is increasing** and **data from the Office of National Statistics (ONS)** shows that the number of deaths related to poisoning by z-drugs in England and Wales has risen from 67 registered deaths in 2010, to 100 in 2014.

### Antidepressants

Statistics on drug-related deaths in England and Wales collected between 1993-2013 show that **antidepressants were consistently the most frequently cited 'licit' substance on death certificates**, though the number of deaths where antidepressants were cited has fluctuated over time. The units of the **Prescribing Indicator** changed in 2013, nevertheless it is still clear that there has been a **significant increase in the prescribing of antidepressants throughout the last decade**.

Prescribing rates in some health boards are more than double the rates in others, and figures for 2013 showed that 3 out of the 7 Welsh LHBs had prescribing rates in the top 10% of all Primary Care Trusts/LHBs across England and Wales.

### Analgesics

Recent research has shown that total opioid-related deaths (excluding morphine/heroin) in England and Wales **increased consistently year on year** from 2003-2011, and more than doubled in total over that period.

Tramadol is a prescription opioid with additional, potentially serious, non-opioid effects that has received particular attention. **Research** shows that from 1994-2009, **tramadol prescribing in the UK increased to ten times the initial amount and at the same time deaths recorded for tramadol in England and Wales increased dramatically**. In 1996 there was just one death, and by 2014 there were 240. However in the past three years, the **National Prescribing Indicators** show that tramadol prescribing in Wales has decreased, from 819 defined daily doses (DDDs) per 1,000 patients in 2013, to 711 DDDs per 1,000 patients in 2015.

There are large differences in tramadol prescribing across Wales, as shown by the geographical variation on [this map](#) (PDF, 661 KB). A **2014/15 Home Office crime survey** found that, unlike with illicit drugs, misuse of prescription only painkillers was similar in urban areas and rural areas. The rate of tramadol prescribing is more comparable between England and Wales than for other prescription drugs subject to misuse.

## Antiepileptics

**Prescribing data from England** shows an approximate **50% rise in prescriptions of pregabalin and gabapentin** from 2011 to 2013. The **2014 DrugScope Street Drug Survey** highlighted the significant use of antiepileptics, chiefly among Britain's opiate-using and prison populations. The survey reported evidence that the number of deaths related to these drugs, while low, has been rising. It also reported anecdotal evidence of a big rise in illicit use of these drugs with 'horrendous' effects when mixed with other drugs such as heroin or methadone.

## 3. Stakeholder views

Although the issue of misuse of POMs and OTC medicines has received an increase in attention recently, there is still a **general consensus that the area is under-researched and not fully understood**.

The **British Medical Association reported** that areas in need of further research include the extent of the diversion problem, the number of prescriptions from primary and secondary care that represent dependent individuals, the levels of dependence and withdrawal caused by each drug, and the long-term effects and levels of harm of the drugs. The Fourth Assembly's Health and Social Care Committee heard evidence during its **Alcohol and Substance Misuse inquiry** that the extent of the problem with OTC medicines is particularly hard to research because large private organisations tend to hold the relevant data on drug sales.

There is **disagreement over the extent to which over-prescribing is to blame** for dependence on POMs. The Health and Social Care Committee heard in evidence that often the initial prescription may be appropriate, but there is a **need for improved review systems**. Several stakeholders have called for GPs to conduct annual reviews of patients on opioid analgesics. GPs have said they find it particularly difficult to identify that a patient may have a dependency issue, and then to start a conversation with the patient about their drug use. The Health and Social Care Committee heard that there may be a **need for more training for GPs** in this area, or for more GPs with expertise in dealing with substance misuse issues to be placed in each practice or group of practices.

There is a large consensus among stakeholders that **illicit drug treatment services are not appropriate for the management of prescription drug dependence**, due to differences in the methods of drug withdrawal and the different psychological influences on developing dependence. Stakeholders note that across the UK, there is a gap in the provision of appropriate and specialised services for prescription drug dependence and no co-ordinated national strategy for the commissioning of these particular services. Some stakeholders have called for the increased funding and availability of non-pharmacological and psychological treatments for dependence.



## 4. What action is being taken?

In 2008 the All-Party Parliamentary Drugs Misuse Group (APDDMG) held an **inquiry into addiction to prescription-only medicines and over-the-counter medicines (PDF 699.24KB)**.

In the same year the Welsh Government published its **Substance Misuse Strategy for 2008-2018**. The Strategy asked the Advisory Panel on Substance Misuse Wales (APoSM) to consider the findings of the APDDMG report from a Welsh perspective and stated that action would be taken towards:

- Encouraging more **responsible prescribing** and reducing inappropriately prescribed medicines in primary care;
- **Monitoring** the purchase of sensitive OTC products; and
- Ensuring that **suitable services** are available for those dependent on POM and OTC medicines.

The recommendations of the **APoSM report** can be summarised under the following four categories:

- **Research and Awareness:** Conduct further research on good practice in prescribing and how to promote a better understanding of these issues amongst patients. Issue guidance for community pharmacies and the general public on the sale of OTC products;
- **Monitoring:** Continue to develop and use prescribing indicators for the key groups of POMs;
- **Training Healthcare Professionals:** Make training resources available including guidance on good prescribing, withdrawal, and alternative non-pharmalogical treatments; and
- **Availability of treatment services:** Review the access to substance misuse services.

APoSM also recommended that the Welsh Government produce a revitalised national medicines strategy which addresses misuse of prescription-only and OTC medicines.

The work that the Welsh Government (WG) has undertaken in each of these areas is summarised below.

### Research and Awareness

Two large pieces of research have been conducted, covering sedatives and analgesics:

- In 2010 the WG funded the Welsh Medicines Partnership, part of the All Wales Therapeutics and Toxicology Centre (AWTTC), to investigate and report on **the nature and scope of benzodiazepines and z drug prescribing in Wales**. This report examined the previous five years of prescribing data and attempted to uncover reasons for variation between LHBs. The report included examples of good practice and was disseminated to LHBs. As part of its **response**, the WG suggested placing UK guidelines for clinical management of drug misuse/dependence and NICE guidance in GP practices, to ensure that patients received a consistent message on prescribing; and
- In 2013, the WG commissioned the APoSM to review the harms associated with prescription-only analgesics. Part 1 of the comprehensive report on reducing the harms associated with tramadol was published in September 2015.

In terms of increasing awareness, the All-Wales Medicines Strategy Group (AWMSG) has **produced or updated** leaflets on OTC analgesics (Medicines for Mild to Moderate Pain Relief, 2011) and tramadol (2013). The Welsh Government and its national helpline Dan 24/7 developed a media campaign providing information on the risks of POM and OTC use.

## Monitoring

Over the past 5 years **National Prescribing Indicators** (PIs) have reported on prescribing rates for sedatives (hypnotics and anxiolytics), antidepressants and opioid analgesics. PIs in use for 2015-16 are hypnotics and anxiolytics, morphine as proportion of all strong opioids prescribed, and tramadol. The publication of these PIs aims to encourage Health Boards to review their prescribing practices.

The Welsh Government's **Substance Misuse Delivery Plan 2013-2015** stated that the inappropriate use of POMs and OTC medicines would be targeted by monitoring patterns and trends of usage in respect to specific OTC drugs and POMs. However, as yet the Welsh Government has not monitored trends in usage of specific OTC drugs.

## Training Healthcare professionals

Several resources have been produced for the purpose of training healthcare professionals. In 2011 the Welsh Medicines Partnership produced an **educational pack to support the appropriate prescribing of hypnotics and anxiolytics** (PDF, 286KB) across Wales.

A similar educational pack to promote safe and appropriate prescribing of tramadol was made available across NHS Wales in 2013.

The Welsh Medicines Resource Centre has also published a pharmacovigilance education module based around tramadol and a case-based learning module on the management of chronic non-malignant pain.

In addition, the Wales Centre for Professional Pharmacy Education (WCPPE) has produced e-learning modules on misuse of tramadol and OTC opioids and a Quick Practice Guide for Targeted Medicines Use Reviews (MURs) concerning tramadol.

## Availability of treatment services

The responsibility for the planning of substance misuse services rests with the 22 Community Safety Partnerships and the Substance Misuse Area Planning Boards (APBs). The Welsh Government has issued **general guidance on the commissioning of services for substance misuse**, which includes the directive that APBs must consider how they will provide services for the whole range of substances and abuse issues. However, **specific guidance on services for POM and OTC medicine misuse is not available**.

There is also nothing which specifically addresses POM or OTC drug treatment services within the most recent **Substance Misuse Treatment Framework** (2014). However there are reference materials on 'Psychosocial Interventions' and 'Improving access to substance misuse treatment for older people', the latter of which includes discussion of addiction to prescribed medication. The Welsh Government is ensuring that the e-learning modules produced by the WCPPE are made available in drug treatment agencies.

The 2013-15 Substance Misuse Delivery Plan stated that Public Health Wales would be reviewing what services are available for those dependent on POMs and OTC drugs in 2014. This action was overtaken by the APoSM review of harms associated with Tramadol and other opioid analgesics.

## Recent developments

**The Health and Social Care Committee's Inquiry into alcohol and substance misuse** was reported on in 2015. In relation to POMs, the Committee recommended that:

*[...] the Welsh Government reviews the guidelines for GPs and pharmacists to reduce the potential for over-prescribing and over-supply, improve patient monitoring, and ensure that, where appropriate, there is an exit plan for patients.*

The Welsh Government responded by stating that the All-Wales Prescribing Advisory group would be asked to consider the Committee's inquiry during 2016. The inquiry evidence also informed the draft **Substance Misuse Delivery Plan for 2016-2018**. It proposes that the Welsh Government works with stakeholders to implement the Advisory Panel on Substance Misuse (APoSM) Tramadol report recommendations, i.e.to:

- 01.** Consider **retaining the tramadol prescribing indicator** for a further two years
- 02.** **Update educational resources** concerning tramadol prescribing
- 03.** **Incorporate a case study involving tramadol into the Prudent Prescribing workshops** being delivered to all health boards in Wales in 2015-16.
- 04.** **Conduct an audit of deaths** associated with tramadol in 2015-16, to examine the impact of interventions.

The Delivery Plan includes actions for APoSM to **further examine the issues associated with analgesics** (including opioid analgesics) other than tramadol in order to make recommendations to improve safe, effective and appropriate use. It also includes an action for the Welsh Government to work with the Welsh Centre for Pharmacy Professional Education, to continue to provide e-learning 'to up-skill pharmacists' knowledge' surrounding the misuse of over the counter and prescribed-only medicines.

## Work by other organisations

- 2009 – The Medicines and Healthcare Products Regulatory Agency published new **guidelines** on sale and promotion of codeine-containing OTC products;
- 2013 – The Royal College of General Practitioners (RCGP) issued **four factsheets** designed to improve the effectiveness and safety of prescribing decisions. These covered opioids, sedatives, antiepileptics and additionally stimulants such as those used to treat ADHD;
- 2013 – Public Health England produced **guidance for NHS and local authority commissioners** on commissioning treatment for dependence to prescription and OTC medicines;
- 2014 - Tramadol was re-classified as a Class C drug by the **UK government**;
- 2014 – Public Health England and NHS England issued **Advice for prescribers on the risk of the misuse of pregabalin and gabapentin**;
- 2015 - The Faculty of Pain Medicine, British Pain Society and others launched a **publication** providing a 'robust reference source for the planning and delivery of Pain Management Services in the United Kingdom';
- 2015 – A report giving an **overview of opioid painkiller dependency in the UK** was written for the All-Party Parliamentary Group on Prescribed Medicine Dependency;

- 2015 – The BMA **collated evidence from a large number of stakeholders** on prescribed drugs associated with dependence and withdrawal;
- 2016 – The Department of Health **commissioned a study to explore patterns of prescribing for medicines with risk of dependence**, including why prescribing guidelines are sometimes not adhered to. The final report is due in the summer of 2016.

## Measuring Success

Whilst figures show that prescribing for some of these classes of drugs has been decreasing in recent years in Wales, it is difficult to ascribe causality to those trends, or to determine whether there has been a consequent decrease in dependence and misuse of the drugs.

An **independent evaluation** of the first three years of the implementation of the Substance Misuse Strategy for Wales concluded that there was a **lack of provision in the strategy for measuring outcomes**. Following this, in 2011 the Key Performance Indicators recorded in the Welsh National Database for Substance Misuse were reviewed, and the Welsh Government states that it has monitored these indicators, in respect of waiting times and engagement rates, since their implementation in 2012.

## Key sources

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