EXAMINING THE OVERPRESCRIBING OF BENZODIAZEPINES, Z DRUGS AND GABAPENTINOIDS IN IRELAND

REPORT OF MULTIAGENCY WORKING GROUP ON OVERPRESCRIBING

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Contents

Executive Summary

Benzodiazepines, z-drugs, and gabapentinoids are all medications commonly prescribed to alleviate symptoms associated with various neurological and psychological conditions which can improve the quality of life for patients. Benzodiazepines, such as diazepam and alprazolam, belong to a class of drugs known for their sedative and anxiolytic properties. These drugs are primarily used for short periods of time.

The overprescribing of benzodiazepines, z-drugs, and gabapentinoids is a critical issue that affects patient safety and has significant implications for public health.

As identified in this report, prescribing patterns of benzodiazepines, z-drugs, and gabapentinoids are significantly influenced by wider societal issues, leading to substantial consequences in healthcare.

While the majority of the drugs examined in this report are on the controlled drugs list, Pregabalin and Gabapentin are not and while not a solution to all issues, the working group felt consideration of adding these drugs to the controlled drugs list would be an additional safeguard.

One of the key issues identified is the lack of prescribing data. Prescribing data is only available for medications prescribed to public patients and as such there is no centrally held data from private prescribing. Legislative options may need to be considered to address this.

The importance of development of a national prescribing solution for Ireland would be a useful step. Current legislation would allow for this development to occur. The development of the National Shared Care Record[1] programme, which will be another project that will provide greater visibility to health professionals on use of these medicines, thereby helping to better monitor and control overprescribing.

Additional publicly funded counselling services available in Primary Care and increased resourcing of pain management clinics and addiction services (particularly around benzodiazepine, z-drug and gabapentinoid dependence) would reduce the number of people requiring prescriptions for these medications. Patients who become dependent upon these drugs should be offered a referral to appropriate drug treatment services and provided with appropriate supports where available.

[1] National Shared Care Record - eHealth Ireland

Additionally, there should be appropriate resourcing of all prescribers to support patients to reduce their consumption of these drugs.

Awareness of the dangers of these drugs needs to be increased amongst prescribers, patients and the wider public. Further educational initiatives should be developed for doctors, pharmacists, and the public to increase awareness of the risks associated with benzodiazepine, z-drug and gabapentinoid use.

This report contains a number of recommendations which the working group believes will reduce the dependence on these drugs, while reducing the prescribing of them. There should be an oversight or implementation group which will require considerable stakeholder involvement across the Irish healthcare system in order to be effective.

1. Introduction

The overprescribing of benzodiazepines, z-drugs, and gabapentinoids is a critical issue that affects patient safety and has significant implications for public health. As the regulator of doctors in Ireland, the Medical Council recognises the challenges prescribers face in regard to the prescribing of such drugs, and seeking to work collaboratively with key stakeholders established this multiagency Working Group to seek to ensure a crucial patient safety issue is being addressed and allows the Medical Council to progress its remit of supporting doctors while protecting patients.

The prescribing patterns of benzodiazepines, z-drugs, and gabapentinoids are significantly influenced by wider societal issues, leading to substantial consequences in healthcare. Socioeconomic factors such as poverty, unemployment, and lack of access to mental health services can contribute to prescription rates and higher rates of benzodiazepine and z-drug prescription have been observed in more deprived areas (Soyombo et al., 2022). The interplay of these broader societal issues underscores the need for careful consideration and regulation in prescribing benzodiazepines, z-drugs, and gabapentinoids ensuring that patients receive appropriate treatment while minimising the risks associated with their use.

This report outlines the key issues identified and recommendations of the Overprescribing Working Group ('the Working Group'), which was established to review and address overprescribing by doctors of benzodiazepines, z-drugs, and gabapentinoids in Ireland. This report aims to highlight the patient safety issues regarding the prescribing patterns of benzodiazepines, z-drugs and gabapentinoids in Ireland. This report makes recommendations with the goal of reducing the initiation and inappropriate prescribing of these medicines in the interests of patient and practitioner safety, and to support prescribers in adherence with guidelines.

1.1 Background to the Working Group

The Working Group was established in 2019 by the then President of the Medical Council, Dr Rita Doyle, to examine concerns related to high rates of prescribing of benzodiazepines (later expanded to include z-drugs and gabapentinoids) and related complaints received by the Medical Council.

The Working Group included representatives from the Health Services Executive (HSE) (Addiction Services, Primary Care, Primary Care Reimbursement Service (PCRS), Medicine Management Programme (MMP), Nurse and Midwife Medicinal Product Prescribing), Department of Health (DoH) (Medicines, Controlled Drugs & Pharmacy Legislation Unit, National Patient Safety Office & Mental Health Unit), the Pharmaceutical Society of Ireland (PSI), Irish College of General Practitioners

(ICGP), Nursing and Midwifery Board of Ireland (NMBI), Health Products Regulatory Authority (HPRA), and College of Psychiatrists of Ireland (CPI). A full list of members who have contributed to the work of this group and the development of this report is available to view in Appendix 1.

2. Medications

Benzodiazepines, z-drugs, and gabapentinoids are all medications commonly prescribed to alleviate symptoms associated with various neurological and psychological conditions which can improve the quality of life for patients. Benzodiazepines, such as diazepam and alprazolam, belong to a class of drugs known for their sedative and anxiolytic properties (Baldwin et al., 2013). They are primarily used for short periods to manage anxiety disorders, panic attacks, and insomnia by acting on the central nervous system (CNS) to promote relaxation and calmness (Baldwin et al., 2013). Z-drugs, including zolpidem and zopiclone, are a newer class of medications designed specifically to treat insomnia. Like benzodiazepines, they also induce sleep by affecting neurotransmitters in the brain and should be prescribed for short-term use (Baldwin et al., 2013). Gabapentinoids, including gabapentin and pregabalin, are antiepileptic drugs that are also used in the treatment of neuropathic pain (Chincholkar, 2020). They work by calming overactive nerve signals in the body, providing relief to individuals suffering from chronic pain conditions. Pregabalin also has an indication for Generalised Anxiety Disorder (GAD) (Gajraj, 2007; Frampton, 2014). Pregabalin and gabapentin are frequently discussed together in the literature, usually under their group name 'gabapentinoid', because they are a similar type of drug, both cited as having a risk of misuse or dependency (Health Research Board, 2018).

2.1 Benzodiazepines

When prescribed appropriately, benzodiazepines are considered relatively safe, as they are effective, fast acting and have low toxicity (Edinoff et al., 2021). However, long-term use of benzodiazepines can lead to adverse events (falls, increased confusion in older adults, road accidents and overdose), reduced tolerance, dependence, withdrawal and dose escalation (Baldwin et al., 2013; Edinoff et al., 2021). While benzodiazepines may have a role in the treatment of a patient on a time-limited basis, caution and monitoring are required when they are prescribed. There are currently twelve benzodiazepine drugs which are licensed for the treatment of anxiety and/or insomnia available for reimbursement under Community Drug Schemes operated by the HSE PCRS reimbursable list (Medicines Management Programme, 2021). Further information on the pharmacological properties of benzodiazepines is available in Appendix 2.

Benzodiazepines can be used in the treatment of a number of conditions depending on their potency, duration of action and receptor site affinities. Some of these therapeutic areas include treatment of insomnia, anxiety, addiction, agitation and neurological disorders. Benzodiazepines are also widely prescribed in the treatment of muscle spasticity, involuntary movement disorders,

detoxification from alcohol, and anxiety associated with cardiovascular or gastrointestinal conditions (Medicines Management Programme, 2021). For more details on the specific indications of individual benzodiazepine drugs the summary of product characteristics (SmPCs) can be accessed on the HPRA website.[2] Benzodiazepines are recommended to be prescribed by doctors for a short period (2-4 weeks) at the lowest dose possible to reduce the risks of dependence and tolerance (College of Psychiatry of Ireland, 2012).

The National Institute for Health and Care Excellence (NICE) guidance on the management of GAD and panic disorder recommends that benzodiazepines should not be offered for the treatment of GAD in primary or secondary care except as a short-term measure during crises or reserved as an option for treatment-resistant cases (NICE, 2020).

2.2 Z-drugs

Z-drugs, also known as non-benzodiazepine hypnotics, were developed with the intention of overcoming some of the disadvantages of benzodiazepines including next-day sedation, dependence, and withdrawal (Medicines Management Programme, 2021). However, as with benzodiazepines, z-drugs can lead to many of these side-effects and no clear evidence of a substantially different effect to short-acting benzodiazepines exists (Medicines Management Programme, 2021). The SmPCs for specific z-drugs can be accessed on the HPRA website for more detail.[2]

Z-drugs are a class of medications prescribed primarily for the treatment of insomnia. Insomnia is a common sleep disorder characterized by difficulty falling asleep, staying asleep, or both, leading to impaired daytime functioning and overall reduced quality of life (Chigome et al., 2018). Z-drugs are designed to help people with insomnia by promoting sleep and improving the duration and quality of sleep. There are currently two z-drugs which are licensed for the treatment of insomnia available on the (HSE PCRS) reimbursable list[3], zolpidem and zopiclone.

2.3 Gabapentinoids

The gabapentinoid drugs, pregabalin and gabapentin are licensed to treat a number of serious conditions including epilepsy (antiseizure), and neuropathic pain. Pregabalin also has an indication for the treatment of GAD (SmPC; HSE, 2020). Gabapentinoids function slightly differently to benzodiazepines and z-drugs, they do not bind to GABA receptors despite their structural similarity.

[2] https://www.hpra.ie/homepage/medicines/medicines-information/find-a-medicine/results?query=&field=
[3] https://www.hse.ie/eng/staff/pcrs/items/https://www.hse.ie/eng/staff/pcrs/items/

Although these drugs are widely prescribed their precise mechanism of action is unknown (Bockbrader et al., 2010; Chincholkar, 2020). Gabapentin and pregabalin differ in how the drug moves through the body and how the body responds (Chincholkar, 2020). One of the greatest pharmacodynamic differences between the two gabapentinoid drugs is that pregabalin has been reported to have a higher potency than gabapentin (Bockbrader et al., 2010).

NICE (2020) guidance on the management of GAD and panic disorder recommends that selective serotonin inhibitors (SSRIs) should be offered as a first-line pharmacological treatment for patients with GAD. Serotonin-nonadrenaline reuptake inhibitors (SNRIs) may be used if there is no response to SSRIs. However, in some instances if the patient cannot tolerate SSRIs or SNRIs, pregabalin can be considered as a treatment option.

2.4 Legislative Control of Benzodiazepines, and Z-drugs

2.4.1 Department of Health (DoH)

In May 2017, the Misuse of Drugs Regulations 2017 replaced the 1988 Regulations, introducing additional controls on benzodiazepines and z-drugs prescribing and dispensing. Subsequently, the PSI and the Medical Council developed and published joint guidelines on the prescribing and dispensing of controlled drugs (including benzodiazepines and z-drugs) to facilitate the safer prescribing and dispensing of controlled drugs, through the collaborative safe and effective care of patients, by prescribers and pharmacists. The HSE Medicines Management Programme (MMP) guidance to support the appropriate prescribing of benzodiazepines and z-drugs in the treatment of anxiety and insomnia and the Irish Institute of Pharmacy (IIOP) and the Irish College of General Practitioners (ICGP) jointly developed Continuing Professional Development (CPD) modules in this area. To support healthcare professionals, the HSE developed tools like individualised benzodiazepine and z-drug prescribing reports for GPs that provides data of pharmacy reported reimbursement claims against the GP General Medical Services (GMS) panel number. However, there is zero visibility within Primary Care Reimbursement Service (PCRS) data for

(a) prescribing indication

(b) private patients who are not under the Drug Payment Scheme (DPS), and

(c) for private patients below the statutory co-payment threshold under the DPS

The Misuse of Drugs Regulation 2017, made under the Misuse of Drugs legislation, categorise controlled drug substances into five schedules. All benzodiazepines are listed on Schedule 3 or Schedule 4 Part 1 as set out in S.I No 173 of 2017 (Misuse of Drugs Regulation, 2017, Schedules).

Zolpidem and zopiclone are listed in Schedule 4 Part 1. The maximum period of validity for a prescription of a Schedule 4 Part 1 benzodiazepines and z-drugs is 9 months. At the time of writing the 9 months relates to an extension during COVID-19 as set out in S.I. 98 of 2020 but that usually the maximum validity of a prescription for a CD4 Part 1 is 6 months (Medicinal Products (Prescription and Control of Supply) (Amendment) Regulations, 2020). This may only be renewed when in the pharmacist's and prescriber's professional judgment continued treatment is required and is safe and appropriate to do so.

2.5 The Potential Reclassification of Gabapentinoids

It is important to note that gabapentinoids are not classified as a controlled drug in the Misuse of Drugs Regulations 2017.

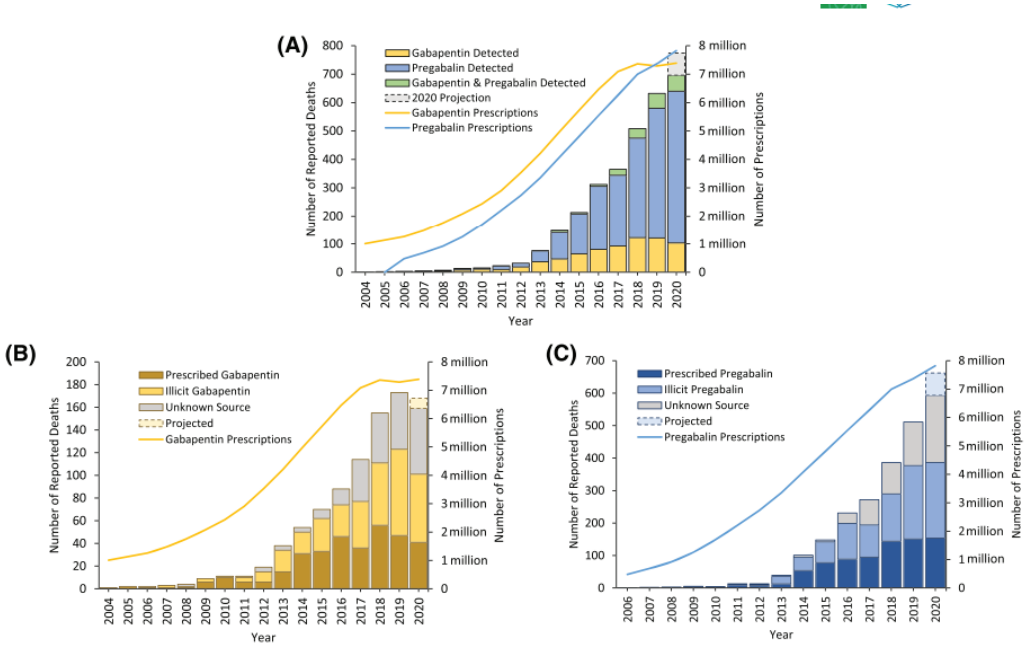
Abuse potential has been reported with both gabapentinoids as these drugs have been linked to feelings of euphoria, sociability and calmness. The abuse potential has been reported as heightened among individuals with a history of opioid abuse as these drugs can enhance the psychoactive effects of other drugs (Evoy et al., 2017; Smith et al., 2012; Smith et al., 2016) highlighting the need for more vigilance when prescribing to vulnerable groups (Brennan et al., 2020). Furthermore, due to the pharmacokinetic properties of pregabalin, it has a higher abuse potential (Bonnet et al., 2017). This can be especially dangerous among individuals with opioid use disorder as naloxone does not act to reverse the respiratory depression that occurs with pregabalin (Cousins & Keenan, 2024).

In April 2019, pregabalin and gabapentin were reclassified as controlled drugs in the UK, following a recommendation from the advisory council for the misuse of drugs citing warnings from the Health and Social Care Board of potential for 'significant misuse and abuse' (GOV.UK Home Office, 2018). They also present a risk of addiction and a potential for illegal diversion and medicinal misuse. Reclassification makes prescribing, dispensing and the collection of these drugs more difficult and was expected to reduce trends in prescriptions.

Based on data reported to the National Programme on Substance Abuse in the UK 3,051 gabapentinoid related deaths were recorded between 2004 and 2020 (Kalk et al., 2022). Notably, the gabapentinoids alone rarely caused death and opioids were detected in most cases (92%). The figure below provides some detail on increasing prescriptions and drug related deaths from 2004 to 2020. Over this time period more gabapentin prescriptions were provided, however, since 2014 pregabalin has accounted for the majority of deaths (Kalk et al., 2022). Despite these drugs being rescheduled in the UK, drug related deaths continue to persist. This figure also highlights the

prescribed versus the illicit use of both gabapentin and pregabalin in the UK. Gabapentin was obtained illicitly in 38.0% of cases and pregabalin was obtained illicitly in 41.0% of cases (Kalk et al., 2022).

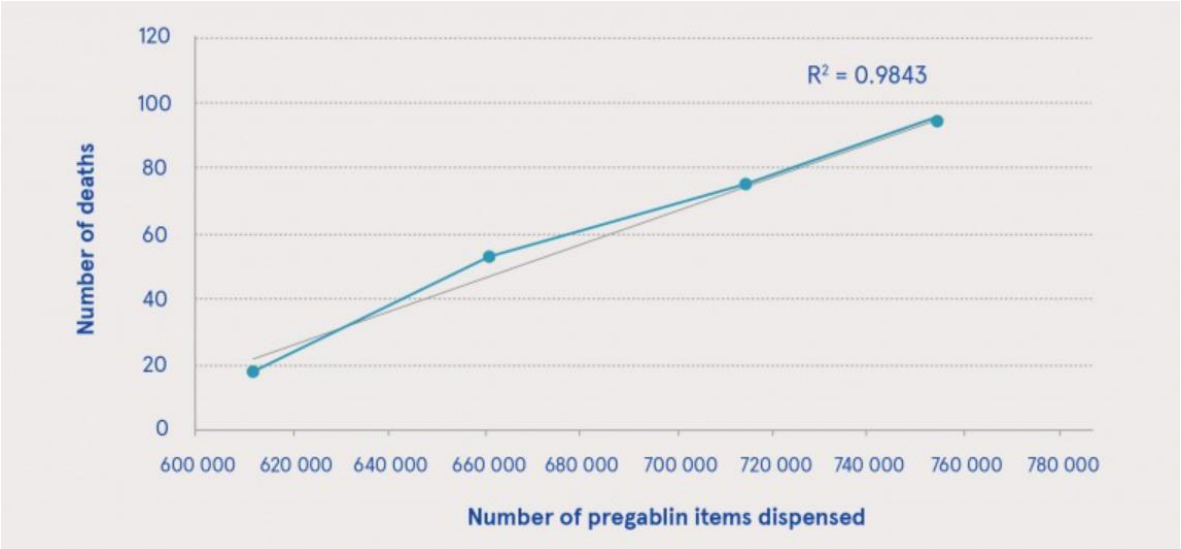
Figure 1. (A) demonstrates total number of deaths where gabapentinoids were reported from 2004 – 2020 and number of GP prescriptions. (B) demonstrates the detection of deaths with gabapentin and (C) shows detection of deaths with pregabalin.



**Note. Additional deaths in 2020 are anticipated to be reported and as such are projected in these figures.*

In Ireland, increased prescription of pregabalin has been linked to increased drugs related deaths citing this drug. In 2019, research by Lynn identified that increased prescription of pregabalin between 2013 and 2016 was positively correlated to increased drug related deaths where pregabalin was implicated at the time (see Figure below). These findings provide some rationale to consider tighter control of gabapetinoids, especially pregabalin through legislative changes in Ireland.

Figure 2. *The association between prescription of pregabalin and drug related deaths citing pregabalin between 2013 and 2016 (Lynn, 2019).*



**Prescription data was taken from PCRS and drug related deaths came from NDRDI.*

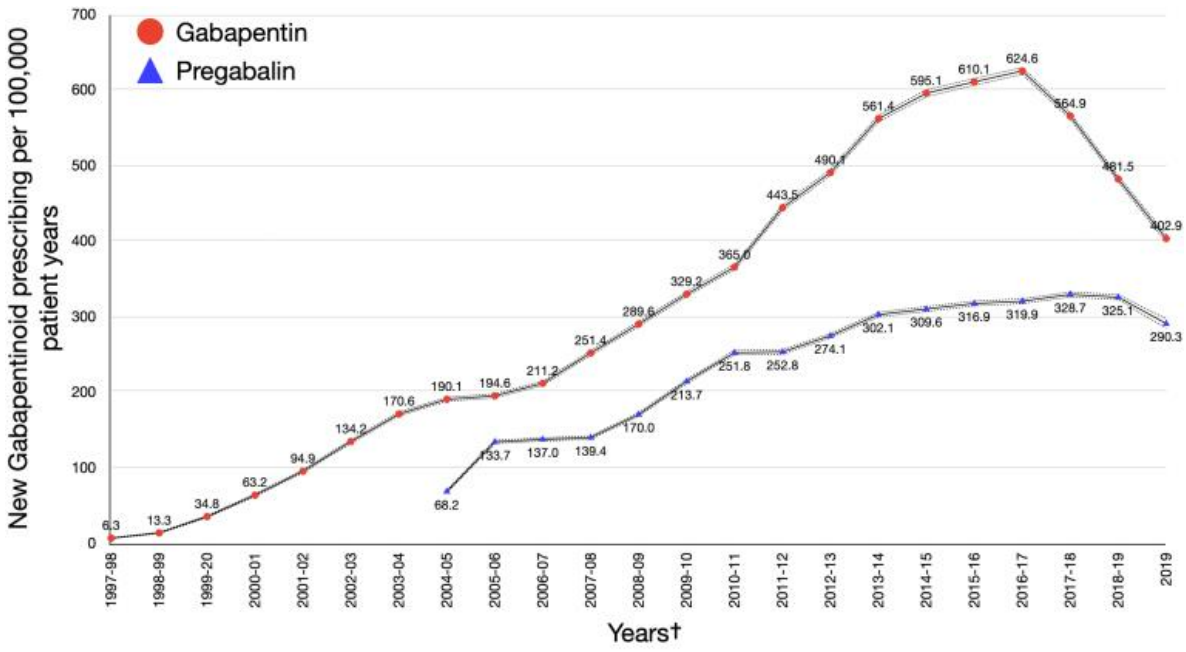
Furthermore, based on the number of deaths reported by the Northern Ireland Statistics and Research Agency (NIRSA) there was one death citing pregabalin in 2013, which increased to 9 in 2016, 77 in 2019 and 71 in 2021 (NIRSA, 2022). Further years of monitoring will be needed to understand the impact further. In a 2022 letter to the editor Nahar and Paterson examined the trends from the toxicology unit at Imperial College London which deals with the analysis of toxicology for coroners in London and the Southwest. Between January 2016 and December 2017 a prevalence of pregabalin of 6.1% was identified and between January 2020 and December 2021, following the reclassification a prevalence of 6.3% was observed (out of 4,977 post mortem cases). The prevalence therefore did not decrease, it increased very slightly by 0.2% and as such further monitoring of the reclassification is required to determine if it is having a major impact on drug-related deaths citing pregabalin.

The impact of reclassification on prescription rates is also not as prompt as expected. Off-label use of gabapentinoids has been reported as common in the United Kingdom whereby these drugs are being prescribed for conditions they are not indicated for (Chincholkar, 2020). Data from the UK demonstrates monthly fluctuations in prescriptions as with previous years and a continued rise in overall numbers (Mahase, 2020). The changes were first announced in October 2018 and when prescription of gabapentinoids in October 2018 and 2019 are compared the number of prescriptions increase very slightly from 151.71 items to 151.93 items per 1,000 patients (Mahase, 2020). Therefore, regulation of the prescribing of this drug may be required to see further impacts.

Moreover, the limited availability of other options may be curtailing any decreases, this is highlighted in the UK whereby areas with increased deprivation and less resources also have higher rates of gabapentinoid prescriptions (Mahase, 2020).

Ashworth and colleagues (2023) examined gabapentinoid prescribing using a broadly representative sample from the UK using the UK Clinical Practice Research Datalink. This study examined trends emerging up until September 2019, immediately following the reclassification. New cases being prescribed pregabalin increased from approval in 2004 up until 2017-2018 and started to decrease in 2019. The specific impact of the reclassification on new cases of pregabalin prescribing is still unclear, however monthly prescribing data suggests a downward trend in incident pregabalin prescribing. Caution is needed in the interpretation here as monthly data is known to fluctuate and yearly trends are more reliable. New cases being prescribed gabapentin increased until 2017 before falling until 2019. This suggests that incident gabapentinoid prescribing has started to decrease since the reclassification. The figure below shows new gabapentinoid prescribing from 1997 until 2019 in the UK.

Figure 3. *Annual rate of new cases being prescribed gabapentinoids per 100,00 patient years in the UK.*

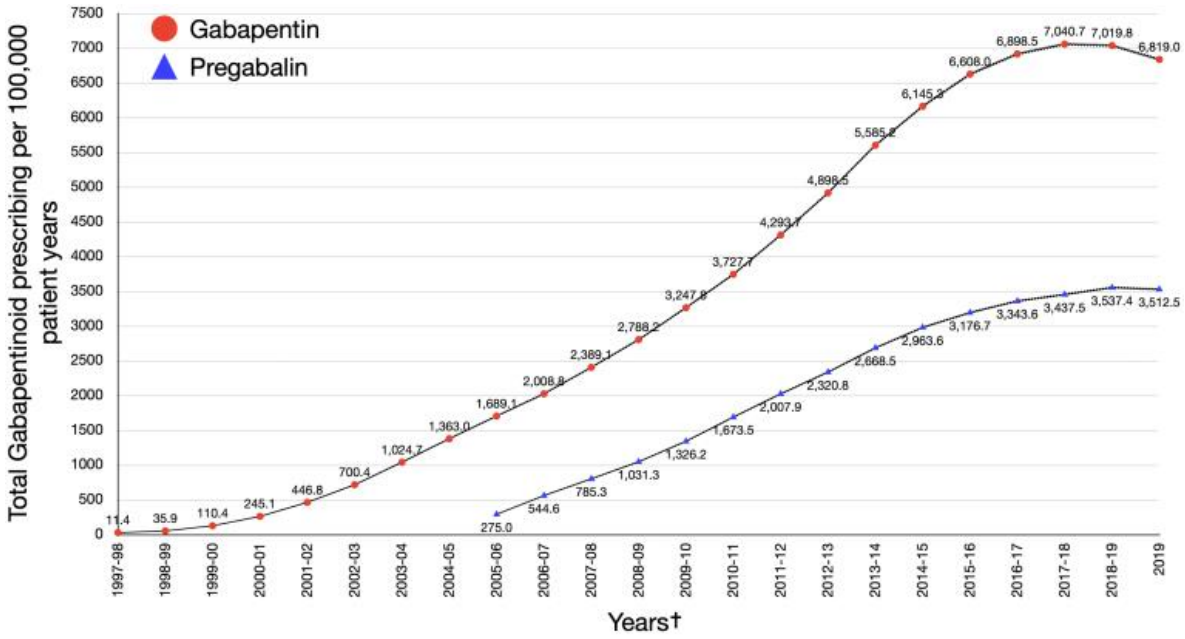


† Each date range from 1997-98 to 2018-19 represents a full year (1st April to 31st March). 2019 represents a half-year from 1st April to 30th September 2019

Continued prescription of pregabalin and gabapentin also increased yearly from approval before plateauing in 2018-2019 and 2017-2018 respectively. The impact of the legislation on continued users is limited with no annual trending decrease identifiable. A slight decrease in continued

gabapentinoid prescribing was noted when looking at monthly trends between July and September 2019.

Figure 4. *Annual rates of continued gabapentin prescribing from 1997 to 2019 per 100,00 patient years in the UK.*



† Each date range from 1997-98 to 2018-19 represents a full year (1st April to 31st March). 2019 represents a half-year from 1st April to 30th September 2019

There was a sentiment in the UK that while practices think more about initiating these drugs, there is a challenge to reducing the prevalence of gabapentinoid prescribing, especially among current users (Ashworth et al., 2023). This may reflect the absence of effective pharmacological alternatives or the limited access to non-pharmacological therapies (Ashworth et al., 2023). Further services and supports to enable patients to come off prescription drugs were called for. A project specifically understanding the impact of reclassification on the prescribing of gabapentinoids and impact of this in Scotland is currently underway and due to conclude in March 2024 (University of Dundee, 2023).

Moreover, research on prescription rates of benzodiazepines and z-drugs following new controlled drugs legislation for the prescribing of benzodiazepines and z-drugs suggests that the legislation had limited impacts on benzodiazepines and z-drugs prescribing in Ireland and that further interventions may be required (Cadogan et al., 2021).

Reclassifying gabapentinoids as a controlled drug has value due to their potential for misuse. This risk is higher among certain vulnerable populations, especially those with an addiction to opioids.

When examining the detection of gabapentinoids in the national postmortem population one in four cases where heroin/methadone was identified in postmortem toxicology also identified pregabalin (Cousins & Keenan, 2024). This is in comparison to less than 5% of the general population (Cousins & Keenan, 2024). There also appears to be a high rate of illicit use in the UK and Ireland. Making gabapentinoids controlled drugs would therefore add additional safeguards and make it more difficult for individuals to obtain these drugs. However, reclassification alone may not be enough. Reports from the UK suggest that while the reclassification can cause doctors to think more about prescribing, when there are limited other resources available the prescription rates may not decrease as expected. Also, the impact of reclassification on drugs related deaths is not immediately clear, consideration to the illegal supply and continued provision due to lack of additional resources also needs to be considered here.

3. Benzodiazepines, Z- Drugs and Gabapentinoid Prescribing.

3.1 Registered Medical Practitioners

Doctors play a crucial role in the safe prescribing of benzodiazepines, z-drugs, and gabapentinoids. Ensuring the safe use of these drugs is essential due to their potential for abuse, dependence, and adverse effects. The Medical Council has set out specific requirements for doctors regarding prescribing of drugs in section 35 of the 9th Edition of the Guide to Professional Conduct and Ethics for Registered Medical Practitioners (Medical Council, 2024). While the Guide is not legislation, it sets out the principles of professional practice and conduct that all doctors registered with the Medical Council are expected to follow. The Guide advises that doctors must be aware of the dangers of drug dependency when prescribing benzodiazepines, among other drugs with addictive potential. The Medical Council must act in the public interest when it is made aware of a risk to patient safety arising from the practice or conduct of a medical practitioner, or to public confidence in medical professionals, or where it is necessary to intervene in order to maintain professional standards. Such intervention is usually following the receipt of a complaint. The Medical Council can take action where complaints are determined to be of a serious nature, giving rise to concerns over a doctor's fitness to practise.

3.2 Registered Nurse/Registered Midwife Prescribers.

Prescribing is not confined to Medical Practitioners alone. The prescribing of medicinal products is an expanded role that registered nurses and registered midwives undertake following successful completion of an approved education programme and having regard to legislation, professional regulation and national and local policies, procedures, protocols and guidelines (PPPGs). The prescribing of benzodiazepines and z-drugs may be undertaken by a registered nurse/ registered midwife prescriber (RN/MP) working in some specialist areas as part of the RN/MP's role and within their scope of practice. In an attempt to limit risks, there are specific criteria that must be included on prescriptions for most benzodiazepines and z-drugs. The prescribing of controlled drugs is detailed in the Misuse of Drugs Regulations, 2017. This outlines in detail the particular requirements that must be met by the RN/MP to issue a prescription for Schedule 4 and 5 controlled drugs MDA drugs and a named schedule 2 or 3 MDA drugs (Schedule 8). The prescribing of schedule 2 and 3 controlled drugs is restricted to those listed in Schedule 8. Schedule 8 provides a detailed listing of

the drugs, routes of administration and conditions for which Schedules 2 or 3 MDA drugs can be prescribed by the RN/MP (Appendix 3). The RN/MP does not have legal authority to prescribe any other drugs listed in Schedule 2 or 3 of the Misuse of Drugs Regulations (2017), a drug which is not listed in Schedule 8, nor write for a different route of administration of the named drug, nor prescribe for any condition/situation not named in Schedule 8.

In addition to adhering to the Misuse of Drugs Regulations (2017), the RN/MP must also adhere to the Nursing and Midwifery Board of Ireland (NMBI) Code of Professional Conduct and Ethics for Registered Nurses and Registered Midwives (2021) which is the overarching structure that informs the framework of professional guidance to registered nurses and registered midwives. The Code outlines professional responsibilities in caring for patients in a safe, ethical and effective way. Registered nurses and registered midwives have a responsibility to uphold the values of the professions to ensure their practice reflects high standards of professional practice and protects the public. In the event that a registered nurse or registered midwife does not adhere to the Code and a complaint is made against him/her the NMBI can investigate as the regulator for the professions of nursing and midwifery The Practice Standards and Guidelines for Nurses and Midwives with Prescriptive Authority 4th Edition (NMBI, 2019) must be complied with when prescribing MDA drugs. Additionally, S.I. No. 529 of 2018 in Medicinal Products (Control Of Placing On The Market) (Amendment) Regulations 2018 provides authority for the RN/MP to prescribe exempt medicinal products within their scope of practice. Resources and toolkits for registered nurse and registered midwife prescribers are available on the HSE website.[4]

It is recognised that prescribing practice requires a multidisciplinary approach to the provision of safe patient care and should be planned in a collaborative manner. The sharing of information and advice by multidisciplinary team members is important in promoting evidence-based high-quality prescribing, which is a key objective of all prescribers.

3.3 Registered Pharmacists

Registered Pharmacists are required to uphold principles set out in their Code of Conduct, which is a public declaration of the principles and ethical standards that govern pharmacists in the practice of their profession. It requires pharmacists to act in the best interest of patients at all times and put systems in place to minimise risks to patients and optimise patient care and public safety. The Code applies to all pharmacists and is distinctly patient-centred, focussing on ensuring that all pharmacists practise in a way that maintains and improves the health, wellbeing, care and safety of patients. Any

[4] https://healthservice.hse.ie/en/about-us/onmsd/onmsd/specific-programmes/nurse-midwife-medicinal-product-prescribing.html

serious breach of the Code where a pharmacist's conduct is considered to have fallen short of the standard of expected conduct may be considered professional misconduct.

Linking with these principles it should be outlined that Pharmacists in Ireland have an important role to play in helping to prevent the overprescribing of benzodiazepines, z-drugs and gabapentinoids and in promoting their safe and appropriate use. Pharmacists contribute to this important task in several ways by:

- Reviewing the pharmaceutical and therapeutic appropriateness of prescriptions when dispensing medicines to patients.
- Undertaking medication reviews to ensure that benzodiazepines, z-drugs and gabapentinoids are being prescribed and used appropriately.
- Monitoring for signs of overuse or potential interactions with other medications the patient may be taking.
- Providing patient counselling to ensure they know how to take their medicine correctly, and to educate patients about the risks associated with benzodiazepines, z-drugs and gabapentinoids including the potential for addiction and dependence.
- Help identify patients who might be attempting to obtain multiple prescriptions for benzodiazepines, z-drugs and gabapentinoids from different doctors. By cross-referencing prescriptions and monitoring patient profiles, pharmacists can detect suspicious patterns of medication acquisition.
- Collaborating with prescribers by alerting them to any concerns they have about a prescription. This open line of communication ensures that doctors are aware of a patient's complete medication history and can make informed decisions about prescribing benzodiazepines, z-drugs and gabapentinoids.
- Monitoring Dispensing Databases: Each pharmacy has their own patient medication record (PMR) which allows the pharmacist to check the patient's previous medication history for items dispensed at that pharmacy, the PMR does not form part of an integrated patient care across all pharmacies. Collection of the dispensing data at an aggregate level as collected by the PCRS is useful in capturing what is dispensed to patients. Accurate and timely information on the prescribing and dispensing patterns of benzodiazepines, z-drugs and gabapentinoids are critical pieces of data for the purposes of data and surveillance.

4.Tracking Use of Benzodiazepines, Z-drugs and Gabapentinoids

4.1 In the Public Health System

4.1.1. How it is recorded

The PCRS is part of the HSE, it processes payments to GPs, Dentists, Community Pharmacists and Optometrists/Ophthalmologists who provide free or reduced cost services to the public, under the GMS scheme. The PCRS holds pharmacy reported reimbursement claim data of benzodiazepines and z-drugs which gives the individual GMS contracted doctors data on their prescribing habits compared to their peers for their medical card patients.

4.1.2 How it is reported

The PCRS operates a suite of Community Drug Schemes that assist individuals with their drug costs, including the GMS Scheme, the DPS and the Long-Term Illness (LTI) Scheme. Prescription-only drugs, including benzodiazepines, z-drugs, and gabapentinoids prescribed under one of the schemes operated by the PCRS are reported on monthly and annually and the open data is published on the PCRS website. This includes the top 100 prescribed products and benzodiazepine and z-drug claims by Community Healthcare Organisation (CHO) Area.[5]

4.1.3 Public Prescription Statistics

Analyses of Irish prescribing data currently relies on GMS data only and a recent policy brief estimated that this covers only approximately one-third of the population (Cousins & Keenan, 2024). This may be providing an inaccurate picture as it over representative of women, those of older age and lower socioeconomic status (Cousins & Keenan, 2024).

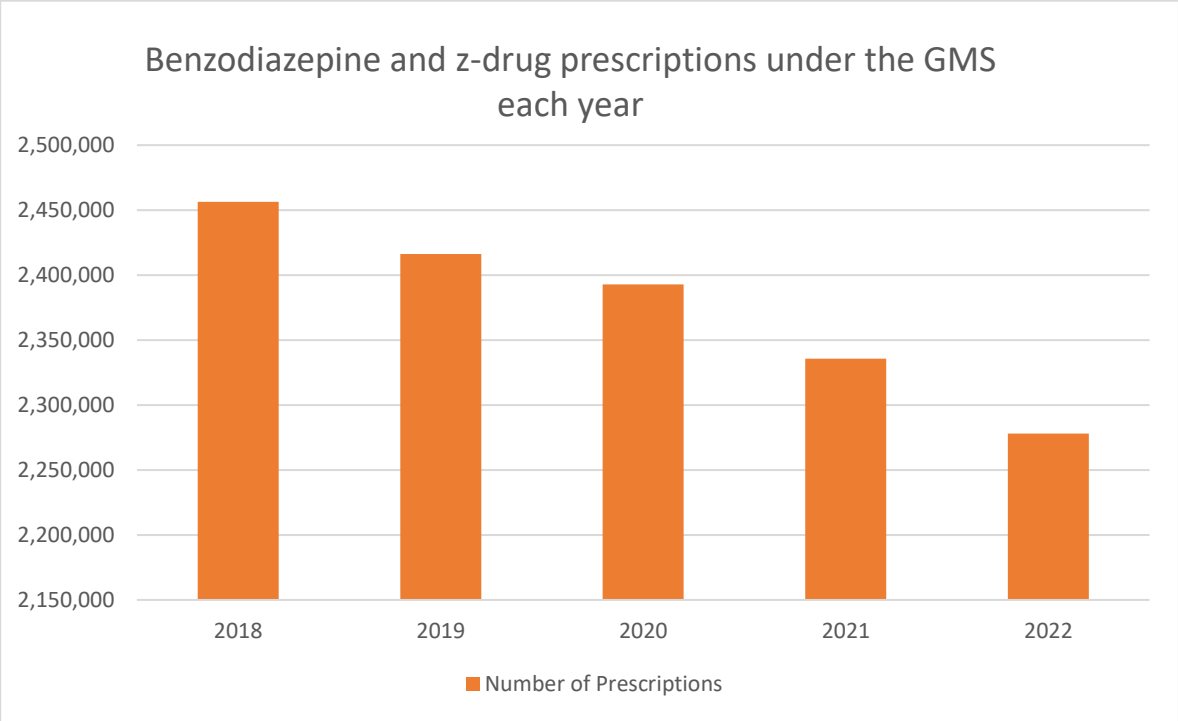
In 2018, 65% of the population either had a Medical Card (1,574,507), were eligible under the DPS (1,290,634) or the LTI Scheme (281,075). This means that prescription data on 3,146,216 people ordinarily a resident of the Republic of Ireland (out of a total 4,867,000) are captured under the PCRS Community Drug Schemes, and that the data available covers a large proportion of residents. Moreover, in 2022, 43.2% of all clinically active doctors in Ireland reported providing both public and privately funded services, while 6.8% reported providing privately funded services only (50.0%

[5] This open data is available at https://www.sspcrs.ie/portal/annual-reporting/

reported providing public services only). GMS data only applies to doctors who provide publicly funded services with a GMS contract.

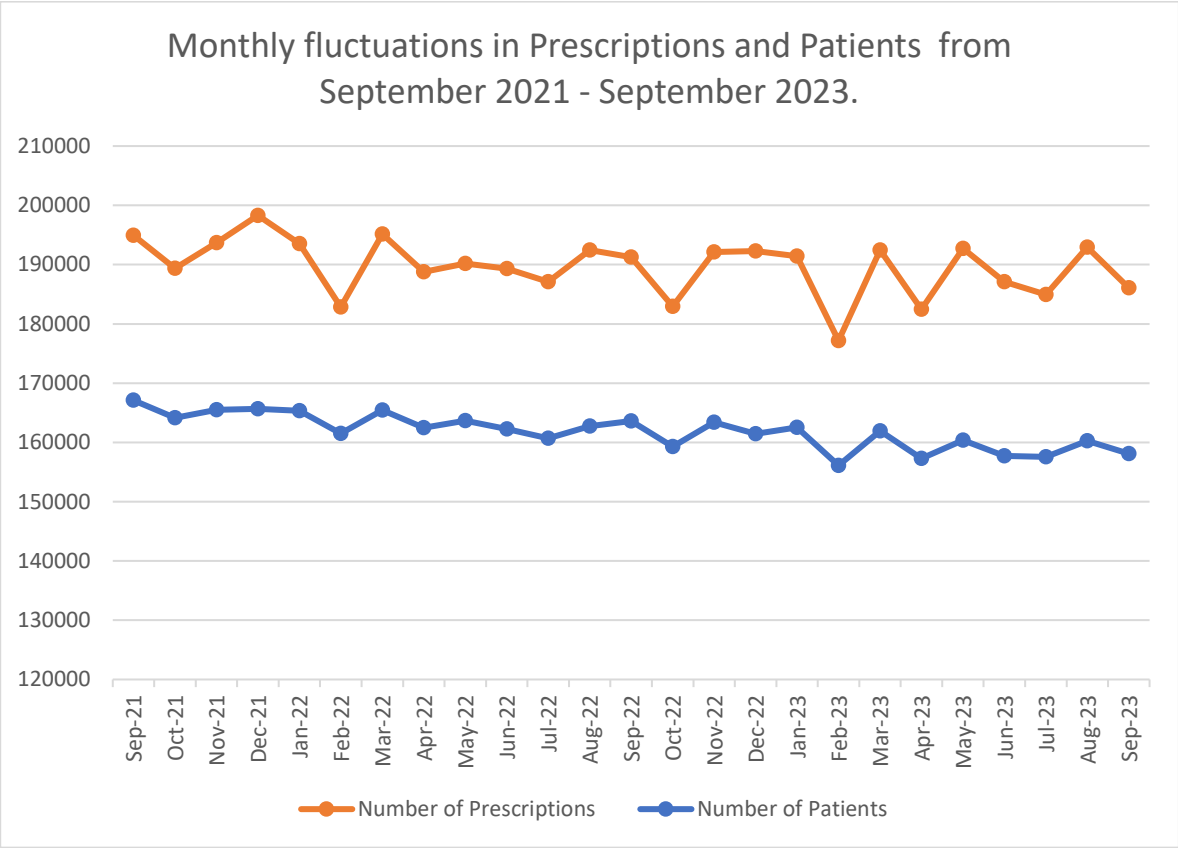
PCRS publishes open data covering all the GMS benzodiazepine and z-drug claims made by community pharmacists under the GMS scheme on a monthly basis. The last full year available while drafting this report was 2022. For comparison the total numbers for each year from 2018 – 2022 were extracted from the PCRS database. This suggests that public prescribing of benzodiazepines and z-drugs have reduced slightly since 2018.

Figure 5. *Number of prescriptions being dispensed under the GMS for benzodiazepines and z-drugs from 2018 – 2022.*



The most recent month available while drafting this report was September 2023. In September 2023, 158,122 patients were dispensed a total of 186,055 prescriptions of either benzodiazepines or z-drugs. To demonstrate the monthly fluctuations in total prescriptions and total number of patients were plotted from September 2021 to September 2023 (latest available month at time of drafting this report). An overall trending decrease can be observed but fluctuations should also be noted.

Figure 6. *Total prescriptions and patients for benzodiazepines or z-drugs between September 2021 and September 2023.*



Reimbursement of diazepam and alprazolam decreased from 5.10%/5.80% in 2018 to 4.67%/5.34% in 2023 based on claims submitted to PCRS. Further detail on these drugs can be observed in Appendix 4.

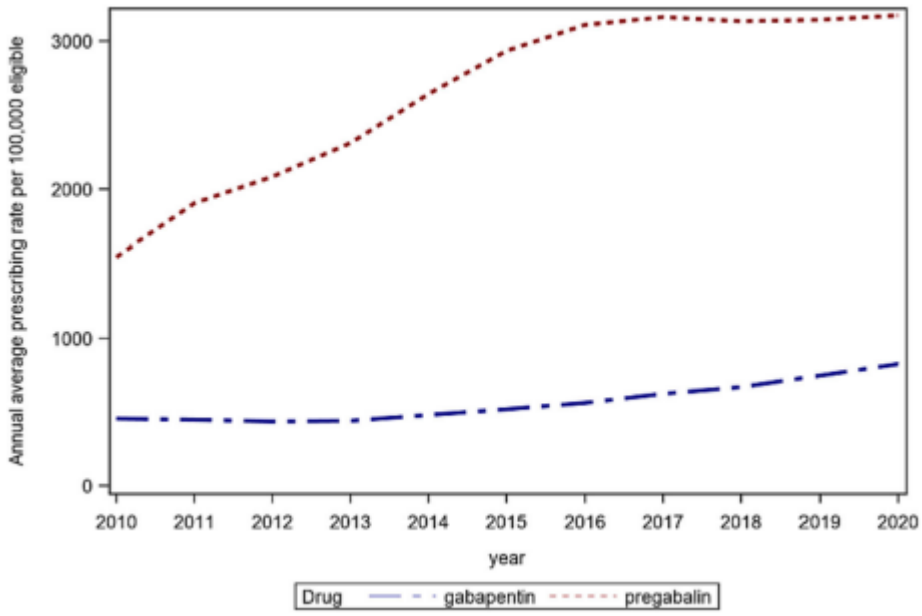
Pregabalin currently is in the top 25 most frequently prescribed products in Ireland (number 24 at the time of drafting this report). In 2021, pregabalin was dispensed under the GMS 615,302 times, at a total cost of €5,827,767, or 1% of the total outlay of the PCRS for medical card holders in 2021[6]. Gabapentin was number 72 on this list and was dispensed under the GMS 157,263 times in 2021, at a total cost of €2,119,989, or 0.26% of the total outlay of the PCRS for medical card holders in 2021.

Pregabalin prescribing was higher than gabapentin each year and rose from 1,546 per 100,000 GMS population in December 2010 to 3,161 per 100,000 population in 2017, and stabilised between 2018 and 2020, with 3,173 per 100,000 population in December 2020 (see figure below for more detail)

[6] PCRS Open Data. Online, available at: https://www.sspcrs.ie/analytics/saw.dll?PortalPages

(Durand, O'Kane et al., 2023). The rate of gabapentin prescribing rose from 454 per 100,000 GMS population in December 2010 to 823 in December 2020 (Durand, O'Kane et al., 2023).

Figure 7. *Average annual prescribing rates of Gabapentinoids to individuals aged 16+ and eligible under the GMS scheme.*



** Figure from Durand, O'Kane et al., (2023).*

This stabilisation reflects a positive trend in the public prescribing frequency of pregabalin when comparing 2017 to 2021. There was a 3.06% decrease in reimbursement claims between 2017 and 2021 (615,302 down from 634,748). The number of unique people making pregabalin claims also appears to have decreased from 5.17% in 2018 to 4.71% in 2022 based on PCRS claims and Medical Card availability (Appendix 4). However, it is important to remember when interpreting this positive trend that what is happening privately is unknown.

4.2 Outside the Public Health System

Currently, only medication dispensed where the payments are processed via the HSE's PCRS are recorded centrally, and data is limited to those prescribers with a GMS contract. While we can see the benefits and positive impact this is having for both doctors and patients, it should also be

extended to non-GMS patients and private prescriptions. It is difficult to identify the full extent of overprescribing due to limited data.

There is little visibility regarding private prescribing practices, as there is no collection of data on private prescriptions issued or medicines dispensed if they are not reimbursed under the GMS. This is of major concern to the members of the Working Group and will need legislative change to enable data collection for all prescriptions. Of the prescribing data that is available, it does not contain information on a patient's clinical condition or the healthcare setting. It is therefore difficult to ascertain what percentage of prescribing is appropriate, for example long-term use could be appropriate in the treatment of certain conditions including epilepsy, spasticity, and other neurological and musculoskeletal disorders.

The Medical Council has previously outlined its concerns around patient safety with regard to the lack of private prescribing data as there is no method of obtaining timely access to a doctor's private prescribing history when investigating very serious prescribing complaints. Gaining access to private prescribing records is a challenge, for the Medical Council and involves carrying out a piecemeal trawl of the geographic area and contacting each individual pharmacy for records as patients can have prescriptions dispensed in different pharmacies, particularly in large urban areas. This can be very time-consuming, expensive and insufficient from a public protection point of view. To accurately quantify the issues of overprescribing of benzodiazepines, z-drugs, and gabapentinoids, we need to ensure that all prescribing (both public and private) of these drugs is recorded centrally.

The initiation and continuation of benzodiazepines, z-drugs, and gabapentinoids prescribing in secondary care is also not captured by the current dispensing data as it is not held by PCRS who manage reimbursement under Community Drug Schemes in primary care.

4.3 Tracking Internationally

Research into the recording of prescribing practises in Europe and the UK was undertaken to gain insight and learnings from what works well in other jurisdictions.

4.3.1 Within Europe

In 2018, in terms of access to medications and associated costs there were six countries within the EU which totally or partially exempted patients from other applicable pharmaceutical costs and charges. A further ten EU countries have various degrees of reduction or exemption from co-payments or charges on the basis of broad categories such as "chronic illness", "terminal illness" and "severe illness" (World Health Organisation, 2018).

Prescribing data is tracked in different ways in different countries. For example, in the Dutch context there are three main sources of prescribing data from primary care which are clinical data in the Electronic Health Records (EHRs) of GP practices; pharmacy data in community pharmacy databases and claims data of insurers (Barbazza et al., 2022). However, to develop actionable insights prioritising data linkages here to build consolidated patient-specific data on the indication for a prescription and dispensed medicine, over time, is needed (Barbazza et al., 2022). France has the SNIIRAM database, the French health insurance database, which covers 98.8% of the French population (Bezin et al., 2017). This database is comprehensive and brings together anonymous information from all reimbursed claims from any health insurance plan and as such medicines used can be linked to demographic data, health care encounters, hospitalisations, and procedures. However, there is a large administrative burden associated with accessing this data (Bezin et al., 2017).

The Nordic countries (Denmark, Finland, Iceland, Norway, and Sweden) have prescription databases covering the entire population. These databases were established between 1993 and 2006 and contain detailed information on drugs, patients and prescribers. In 2005 the Swedish Prescribed Drug Register was extended to include the identity of individual patients. These prescription databases allow the possibility of record-linkage and represent an exceptional resource for assessing the beneficial and adverse effects of drug use in large populations (Wettermark et al., 2013). While not directly transferable to the Irish situation there may be valuable insights to be gained from further exploration of how these databases were established (Wallerstedt et al., 2016). Interestingly, in order to ensure patient safety these Nordic countries have started to establish further mechanisms of monitoring medication use. They are working towards digitally shared medication lists to provide updated and correct medication lists between the municipal health service, GPs, and hospitals in order to reduce medication errors (Norwegian Centre for E-Health Research, 2023). This will allow them to add additional mechanisms of keeping up-to-date information on patients' medication use.

4.3.2 Within the UK

In the UK the English Prescribing Dataset (EPD) contains detailed information on prescriptions issued in England that have been dispensed in England, Wales, Scotland, Guernsey, Alderney, Jersey, and the Isle of Man.[7] This dataset provides good oversight of prescribing data which provides a single, comprehensive, accessible, and consistent source of prescribing information. This dataset excludes

[7] https://www.nhsbsa.nhs.uk/prescription-data/prescribing-data/english-prescribing-data-epd

prescriptions prescribed and dispensed in Prisons, Hospitals and Private prescriptions and data relating to prescriptions issued in Wales, Scotland, Guernsey, Alderney, Jersey, and the Isle of Man.

The NHS also host a data warehouse called ePACT2, which is part of the NHS Business Services Authority. This gives authorised users access to prescription data and allows them to access easy to use interactive reports and dashboards, look at high level data summaries down to individual prescription item and patient level detail, build bespoke analysis and export data from reports and dashboards.[8]

[8] https://idcs-5e48a6c7d2ea4150bcdcdc847318d62b.identity.oraclecloud.com/ui/v1/signin

5. Specific Issues in Patient Safety

The lack of a centralised record of all prescriptions for a given individual presents a risk to patient safety. In response to the COVID-19 pandemic amendments were made to the Medicinal Products (Prescription and Control of Supply) Regulations 2003 (as amended) enabling prescribers to send prescriptions to a patient's chosen pharmacy using the national electronic prescription transfer system, Healthmail. While it is important to note that paper prescriptions still exist and are in use, overall, Healthmail has been widely perceived to have had a positive impact on medication safety (Gleeson et al., 2022).

5.1 Benzodiazepines

The Working Group recognise that the overprescribing of benzodiazepines presents issues around patient safety in that excessive and inappropriate use of benzodiazepines can lead to addiction, adverse reactions, and reduced quality of life for patients. Additionally, long-term use can result in tolerance and dependence, contributing to dependency and misuse issues. In Ireland, concerns over long-term benzodiazepine prescribing and the potential for dependence and misuse led to the Benzodiazepine Committee being established in 2000. This national, multidisciplinary committee was tasked with examining existing benzodiazepine prescribing in Ireland and making recommendations to foster rational prescribing practices and reduce inappropriate use (Benzodiazepine Committee, 2002). The DoH recognises the concerns of the Working Group in terms of getting better oversight of the use and appropriate prescribing of benzodiazepines, z-drugs, and gabapentinoids. There are many different areas of research that touch on the impact that benzodiazepines can have on public and patient safety.

5.1.1 The Health Research Board (HRB)

The Health Research Board (HRB) report yearly data on problem drug use and drug related deaths in Ireland. Both of these sources provide some insight into the impact that different illicit and prescription drugs can have. The National Drug Treatment Reporting System (NDTRS) is a surveillance system of all reported drug and alcohol treatment initiated in a given year in Ireland. In 2022, benzodiazepines were the main problem drug in just over one in ten people entering specialist treatment (10.7%), an increase from 9.7% of cases in 2016. Moreover, in 2022 they were the fourth most common additional drug cited in polydrug cases (O'Neill et al., 2023).

Benzodiazepines have been identified as contributors to drug-related deaths. The Working Group acknowledges the role of benzodiazepines in contributing to drug-related deaths and the need to

address this issue as part of the broader strategy for harm reduction. The most recent data on drug-related deaths due to poisoning comes from the National Drug-Related Deaths Index (NDRDI). In 2020, the HRB provisionally reported 409 poisoning deaths, and 8 in 10 of these reported more than one drug[9]. Benzodiazepines were the most common prescription group implicated in poisoning deaths with almost 6 in 10 cases (55.8%, N = 228) involving benzodiazepines and in many of these cases more than one type of benzodiazepine was recorded. This is very similar to the proportion recorded in 2016 (55.4%, N = 147). Diazepam was the most common benzodiazepine drug implicated in 130 (32%) of all poisoning deaths in 2020, an increase from 90 (24%) in 2017 (Health Research Board, 2017). One trend in relation to benzodiazepines that is worth noting is a steady rise in relation to the number of deaths where alprazolam is implicated. This increased from 12 in 2010 to 63 in 2017 (Health Research Board, 2017).[10] While some alprazolam may be obtained illegally ('street' benzodiazepine), it is nevertheless important to remain vigilant in relation to prescribing of this drug.

5.1.2 The National Suicide Research Foundation

The National Suicide Research Foundation publishes annual data relating to non-fatal self-harm presentations to Irish hospitals collected via the National Self-Harm Registry Ireland (NSHRI). Benzodiazepines recorded as 'minor tranquillisers' are the drugs most often involved in intentional drug overdose by males and females. In 2020, 39% of male and 28% of female intentional overdoses involved one or more benzodiazepine drugs. Contextually these proportions are substantially higher than the 14% recorded by a similar Registry in the United Kingdom, known as the Multicentre Study. The involvement of benzodiazepines in intentional overdoses increases with age, peaking among those aged 45 and older and the specific benzodiazepines of concern include diazepam, alprazolam and flurazepam. Furthermore, benzodiazepines use in intentional overdose is associated with an increased risk of self-harm repetition, signalling the need to address this form of drug misuse.

5.1.3 The Health Products Regulatory Authority (HPRA)

The HPRA has a dedicated Enforcement section to investigate the illegal supply, manufacture or advertising of medicines, working closely in co-operation with An Garda Síochána (AGS) and Revenue Customs Service in this regard. As part of its Enforcement remit, the HPRA detains, at port of entry into Ireland, illegally supplied medicines purchased online and detains medicines as part of its investigative activities. Over the time period 2010-2022, a total of 12,544,900 dosage units of all

[9] https://www.hrb.ie/news/press-releases/single-press-release/article/health-research-board-reports-latest-drug-related-deaths-figures/#:~:text=New%20preliminary%20figures%20from%20the,on%20Saturday%2024%20June%202023.
[10] Figures for 2020 for alprazolam specifically were not available at the time of writing this report.

medicines have been detained by the HPRA, including 1,312,095 dosage units of benzodiazepines. There has been a reduction in detentions by the HPRA of benzodiazepines and z-drugs after 2017, as benzodiazepines and z-drugs became controlled drugs under Schedule 4, Part 1 of the Misuse of Drugs Act 2017, as amended and therefore the HPRA is no longer the primary agency responsible for detention of these medicines.

In addition to reports from pharmaceutical companies, reports of suspected adverse drug reactions (ADRs) are notified to the HPRA on a voluntary basis by healthcare professionals and members of the public. As suspected adverse drug reactions are collected via a passive surveillance system, it is recognised that there are limitations to this data, including underreporting. Between the 1st of January 2013 and 31st of December 2023, a total of 188 suspected adverse drug reactions reports were received by the HPRA in association with benzodiazepines[11], of which 50 described drug abuse, dependence and withdrawal.[12]

5.1.4 An Garda Síochána (AGS)

The HRB as the Irish National Focal Point provides a regular update to the European Monitoring Centre for Drugs and Drug Addiction (EMCDDA) in relation to the area of drugs markets and crime. Information in relation to seizures is provided by AGS. The report identifies that prescription medication is an issue across the Republic of Ireland (ROI) and Northern Ireland (NI) and involves the importation, manufacture, and sale of pharmaceutical products. Benzodiazepines are popular with individuals who are using heroin, managing pain, or trying to improve cognitive and/or physical function. The report highlights the illegal street sale of prescription drugs and in recent years these are primarily benzodiazepines and z-drugs seized by AGS and analysed by Forensic Science Ireland. These drugs are discussed together in the report and therefore some of the following paragraph refers to both benzodiazepines and z-drugs. Following a peak in 2013 (N=861), the number of seizures of hypnotic and sedative substances decreased annually until 2016. However, some yearly fluctuations were then observed. A 73% increase in these seizures was recorded between 2016 and 2017, followed by a 49% decrease between 2017 and 2018. The number of seizures analysed in 2019 (N=1269) was more than four times higher than those reported in 2018 (N=309). This increased again between 2019 and 2020 (8%) and between 2020 and 2021 (6%). The most prominent drug in this category in 2021 was alprazolam, followed by zopiclone and diazepam, and delorazepam.

[11] Retrieved using advanced search functions to interrogate the HPRA's database of licensed products, March 2024.

[12] Retrieved using the Medical Dictionary for Regulatory Activities (MedDRA) Standardised MedDRA Query of Drug abuse, dependence and withdrawal.

Following the overall trend for this category between 2020 and 2021, alprazolam increased by 11%. While decreases were evident in zopiclone (10%) and a smaller decrease in delorazepam (1%).

AGS also provided specific details on the statistical figures on benzodiazepines for a 5-year period. This suggests the value of the drugs seized increased slightly from 2020 to 2021.

Figure 3. *Details on benzodiazepines seized by AGS.*

Year	grams/mls/Plant	Tbls/Eqr/Caps	Value
2021	5,481	437,045	**€768,091**
2020	714	471,403	**€726,858**
2019	137	243,000	**€406,754**
2018	26,711	912,327	**€1,622,036**
2017	16,341	115,567	**€1,374,908**

In relation to uncovering online sales of illegal medicines, AGS work in conjunction with the HPRA and in 2021, 461 websites, e-commerce listings and/or social media pages were amended or shutdown. Operation Pangea is an annual Interpol coordinated international week of action which targets online sales of falsified and illegal medicines through illicit online suppliers and/or e-commerce platforms. In Ireland, this is undertaken by a partnership of the HPRA, Revenue's Custom Service and AGS. During Operation Pangea in 2021,103,000 dosage units were detained in one week alone.

5.2 Benzodiazepine Prescription Trends

Small fluctuations in the prescription of benzodiazepines can be observed when various sources are considered together. However, a positive trend whereby there was a decrease in PCRS benzodiazepine prescriptions has been observed.

In Ireland, a positive trend has shown prescription rates of benzodiazepines decreased significantly from 225.92 patients per 1,000 population in 2005 to 166.07 patients per 1,000 in 2015 (Cadogen

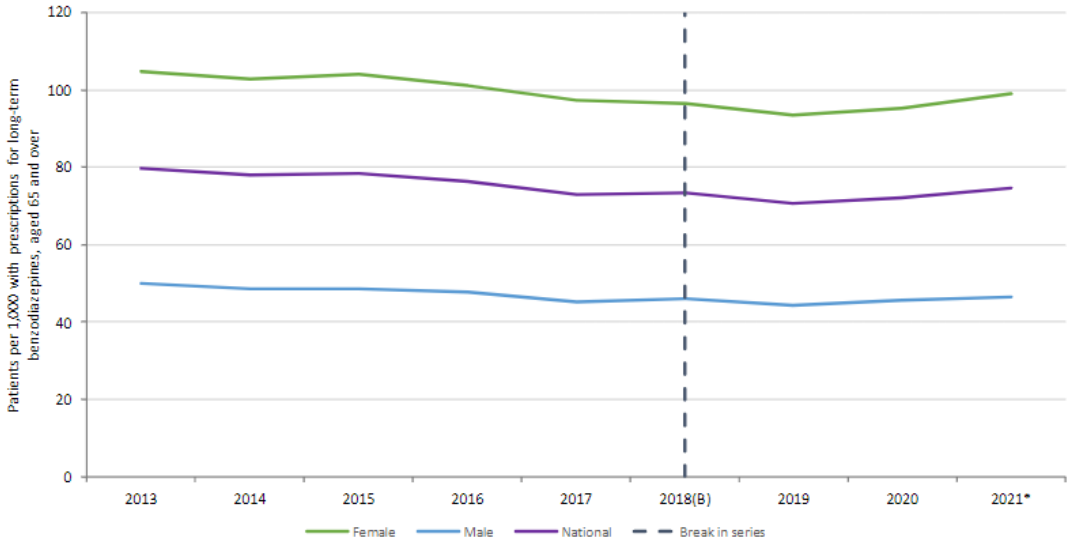
et al., 2018). However, this same study demonstrated that nearly one-third of individuals prescribed benzodiazepines were being prescribed on a long-term basis (> 3 months). Furthermore, this long-term use was more common in older women.

Monthly trends in benzodiazepines prescribing before and after the introduction of the Misuse of Drugs Regulations 2017 were analysed which demonstrated that from January 2016 to April 2017 the prevalence of benzodiazepine prescribing decreased, however, from May 2017 to September 2019 this increased slightly despite the legislation (Cadogen et al., 2023).

Analyses of the PCRS pharmacy claims were performed by the MMP to determine prescribing trends of benzodiazepines from 2017 to 2020 and a slight decrease was noted from approximately 93,000 patients receiving benzodiazepines in January 2017 to 85,700 patients in January 2020. Approximately 15% of patients who initiated benzodiazepines in January or February 2019 were dispensed these drugs for more than 3 months (Medicines Management Programme, 2021). Furthermore, as noted in the PCRS data above, when September 2019 and September 2023 were compared the rate of prescriptions had decreased, and rates of specific benzodiazepines (diazepam/ alprazolam) also decreased from 2018 to 2023 (see figure in section 4.1).

The prescribing of benzodiazepine medicines in those over 65 years of age, particularly in women, is higher than known international averages. This is of concern as older individuals face additional risks with benzodiazepines due to increased sensitivity and slower metabolism (DoH National Patient Safety Office, 2023). Research has suggested that benzodiazepine use is associated with falls, and this is increased among those individuals displaying poor sleep quality indicators such as trouble falling asleep, early-rising and daytime somnolence (Marron et al., 2020). In 2020, among patients aged over 65 years, Ireland had the second highest rate of prescription in the OECD, with 70.7 patients per 1,000 being prescribed benzodiazepines, compared with the OECD average of 27.9 patients per 1,000 (DoH National Patient Safety Office, 2023). This was second only to Iceland (99.4 patients per 1000). In 2021, Ireland remained the second highest with 74.6, behind Iceland with 87.5 per 1000 population (OECD.Stat, 2023). The long-term rate of benzodiazepine prescribing is disproportionately high for females (99 per 1000) in comparison to males (46 per 1000), as can be observed in the figure below from the National Healthcare Quality Reporting System (NHQRS) Report.

Figure 4. *Number of individuals (with breakdown of males and females) aged 65 and over dispensed a benzodiazepine prescription for 12 months or more per 1,000 eligible persons from 2013-2021.*



**Data from 2021 reflects 11 months in comparison to 12 due to the HSE cyber-attack and should be considered when interpretating results. There is also a break in the series in 2018 when an additional drug was added to the group of benzodiazepines, as such you cannot directly compare before and after 2018.*

It is important to note that information on private prescription dispensing is not recorded or reported on by the NHQRS.

5.3 Z-Drugs

The Working Group also recognises the growing concern regarding z-drugs with similar potential for misuse. In common with benzodiazepines, the sedative effects of z-drugs may persist the next day. Tolerance, dependence and withdrawal symptoms can also occur. Irish research demonstrated that z-drug prescribing increased from 95.36/1000 population in 2005 to 109.11/1000 population in 2015 (McNamara et al., 2020). Further research suggested this was stable from January 2016 to April 2017 but that some increases were observed from May 2017 until September 2019 (Lynn et al., 2020).

5.3.1 The HRB

In relation to individuals entering specialist treatment as recorded by the HRB, z-drugs as a main problem drug decreased from 1.1% in 2016 to 0.8% (98 cases) in 2022 (O'Neill et al., 2023). Data on z-drug related deaths were not specifically published in the 2020 update (Health Research Board, 2023).

5.3.2 The NSHRI

Zopiclone and zolpidem are among the top 10 drugs most frequently used in intentional overdose, as recorded by the NSHRI. Their involvement in intentional overdose is significantly higher among individuals aged 45 and over, compared to younger counterparts (Daly et al., 2018b).

5.3.3 The HPRA

Over the time period 2010-2022, a total of 1,366,539 dosage units of z-drugs have been detained by the HPRA. Moreover, between the 1st of January 2013 and the 31st of December 2023 a total of 59 suspected adverse reaction reports associated with z-drugs were received by the HPRA, with 15 reports describing drug abuse, dependence and withdrawal.[13]

5.4 Gabapentinoids

Gabapentinoids have been identified as having a potential for abuse and individuals who misuse these drugs are often taking much higher than recommended doses and have a history of misuse or dependence on other drugs, in particular, opioids (McNamara et al., 2015). People who misuse opioids appear to use gabapentinoids to achieve a quicker high and reduce withdrawal. This close association with misuse of opioids may be influencing the increased prevalence of misuse/dependence and serious side-effects, including fatal overdose (Lynn et al., 2020).

In June 2016, the Early Warning Emerging Trends (EWET) subcommittee of the National Advisory Committee on Drugs and Alcohol wrote to health care professionals highlighting the need for vigilance when prescribing and dispensing pregabalin and gabapentin, as these drugs present a risk of addiction and a potential for illegal diversion and misuse. Prescribers were advised to always undertake a risk benefit assessment prior to prescribing either of these medicines for patients under their care.

5.4.1 The HRB

While both gabapentin and pregabalin have been reported as having the potential for misuse and abuse, gabapentin alone has not been reported on regarding specialist treatment or drug related deaths by the HRB.

[13] Retrieved using the Medical Dictionary for Regulatory Activities (MedDRA) Standardised MedDRA Query of Drug abuse, dependence and withdrawal

Pregabalin was reported as the main problem drug in 43 cases (0.5%), up from 40 cases in 2021 and it was reported as a secondary drug in 88 cases, an increase from 71 in 2021 among those entering specialist treatment (O'Neill et al., 2023).

The implication of pregabalin in drug-related deaths has fluctuated but increased overall from 2014 to 2020. In 2014, pregabalin was cited in 8.5% of cases (27/319), in comparison to 20.5% of cases (87/409) in 2020. Between 2014 and 2020 its incidence fluctuated, peaking with 21.3% of cases (67/319) in 2016 citing pregabalin (Health Research Board, 2023).

5.4.2 The NSHRI

In terms of trends, between 2007 and 2015 the involvement of gabapentinoids in intentional overdose increased proportionally from 0.5% to 5.5% (Daly et al., 2018a). The involvement of gabapentinoids in intentional overdose was also associated with greater clinical severity, indicated by a greater number of tablets consumed and higher proportions of admission to hospital, when compared to overdoses with other drug types. Furthermore, between January 2012 and December 2014, 8.9% of intentional drug overdoses involved antiepileptic drugs, and in many cases these were gabapentin or pregabalin. Pregabalin appeared to be more problematic as it was the 7th most frequently used drug, involved in 4% of intentional overdoses (Daly et al., 2018b).

5.4.3 The HPRA

Over the time period 2010-2022, a total of 46,857 dosage units of gabapentinoids have been detained by the HPRA. Detentions of gabapentinoids by the HPRA have increased since 2017, with 30,383 dosage units (65%) of the total detained over the period 2021-2022. Drug seizures of pregabalin have been higher than gabapentin each year (Cousins & Keenan, 2024).

Between the 1st of January 2013 and the 31st of December 2023, a total of 338 suspected adverse reaction reports associated with gabapentinoids were received by the HPRA, of which 94 described drug abuse, dependence and withdrawal. The majority of these were reported in association with pregabalin.[14]

[14] Retrieved using the Medical Dictionary for Regulatory Activities (MedDRA) Standardised MedDRA Query of Drug abuse, dependence and withdrawal

6. Complaints to the Medical Council

In its role as statutory regulator, the Medical Council investigates complaints relating to the prescribing of controlled drugs which raise concerns in respect of a doctor's fitness to practice. Complaints considered by the Council's Preliminary Proceedings Committee (the "PPC") can be classified across a number of categories and sub-categories under the broader headings of professional conduct and professional performance. Categorising complaints is carried out by an authorised officer (a case officer) appointed by the Council to assist the PPC.

During the period from January 2018 to December 2022, a total of 201 complaints made to the PPC indicated issues relating to prescribing generally and were categorised as concerns regarding the professional practice of a doctor. Such complaints can relate to any issue with prescribing and are not limited to overprescribing issues alone. While a number of these complaints (157) did not give rise to serious concerns in respect of a doctor's prescribing practice, 44 complaints were referred to the Fitness to Practice Committee (FtPC) for Inquiry, as the PPC had serious concerns in relation to the doctor's prescribing practice. Since 2020, there has been a reduction in both the total number of prescribing related complaints made and in the number of prescribing related complaints referred to Inquiry. The breakdown of these cases per year can be observed in the table below.

Table 1. *Total number of complaints received per year and the outcome.*

	Total No of Prescribing Complaints	Not sufficient cause to warrant an Inquiry	Sufficient cause to warrant an Inquiry
2018	58	48	10
2019	48	37	11
2020	49	37	12
2021	25	17	8
2022	21	18	3
Total	201	157	44

For the purpose of this report, the authorised officers' summary of the 201 prescribing complaints were qualitatively analysed to ascertain how many of them related to over-prescribing of benzodiazepines, z-drugs, gabapentinoids and/or a combination of these drugs. From the analysis carried out over the five-year period, we identified **32** (15.9%) complaints which related specifically to overprescribing. Of these 32 complaints, benzodiazepines, z-drugs and/or gabapentinoids were

cited in **23** (71.9%) of them. The remaining **9** cases (28.1%) either specified different drugs or did not specify the drugs in question.

It is important to note that this extracted data is illustrative of the summaries recorded by individual authorised officers when complaints are received. The summaries are not intended to record the specific details of the full complaint. From our analysis of the 32 complaints which cited overprescribing 11 (34.4%) were referred to the FtPC for Inquiry, **8** (72.7%) of which related to benzodiazepines, z-drugs, gabapentinoids or a combination of the three (N = 8, N = 72.7%).

Complaints which raise concerns regarding a doctor's prescribing practice are considered serious and complaints which relate to over-prescribing may fall within the most serious category, depending on the circumstances of the case. In the most serious cases, the Council can take immediate action to protect the public in accordance with the provisions of section 60 of the Medical Practitioners Act 2007. Section 60 empowers the Council to make an ex-parte application to the High Court for an order to suspend the doctor's registration. The effect of the order is to suspend the doctor from practicing in Ireland pending the conclusion of the complaints process.

Between January 2018 and December 2022, the Council deemed it necessary to take immediate action in relation to 19 doctors[15] pursuant to section 60 as serious concerns were raised in respect of prescribing of benzodiazepines, z-drugs or gabapentinoids. In these cases, the Council met to consider whether to make an application to the High Court.

[15] This figure is based on data available at time of writing this report.

7. Supports for Patients, Prescribers and Other Health and Social Care Professionals

In September 2019 the Medical Council issued advice to doctors in a bid to reduce over prescribing of benzodiazepines, z-drugs, and the gabapentinoid drug pregabalin (Appendix 5). The Council acknowledged the challenges faced by doctors, particularly when faced with demands from some patients and limited access to counselling and services.

The Working Group are conscious that much of the guidance issued appeared to focus on the practice of GPs. GPs have a role in transcription of hospital-initiated prescribing particularly from the mental health services. Due to the fact that only PCRS reimbursement data is available, the picture of GP prescribing is limited, as there is no mechanism to report on the hospital-initiated prescriptions. Any recommendations made as a result of this report need to address this system flaw.

The primary focus of the Medical Council's response is to shift the emphasis in medical practice to prioritise patient safety. The Working Group emphasises the need for doctors to consider the long-term effects and potential risks of benzodiazepine, z-drug and gabapentinoid prescriptions.

The Working Group acknowledges that there is a lack of public health campaigns on the dangers of prescription medications with addictive potential. Having public health campaigns in place would assist doctors in managing tensions in the patient-doctor relationship, and support navigating difficult discussions between what patients themselves believe they need and what the patient actually needs.

Appropriate resourcing, in the form of education and training, increased access to integrated care models and to counselling and addiction services needs to be provided for all prescribers to support patients to reduce their consumption of benzodiazepines, z-drugs and gabapentinoids. It must be acknowledged that addressing these issues require a significant time commitment particularly in General Practice. There is difficulty with access to counselling services and addiction services, this has a knock-on impact by placing further strain on patients and the efforts of health professionals to address their needs.

7.1 HSE-Medicines Management Programme

The HSE-Medicines Management Programme (MMP) has published guidance to support the appropriate prescribing of benzodiazepines and z-drugs in the treatment of anxiety and insomnia (Medicines Management Programme, 2021). In January 2020, the MMP published a summary guidance document to support appropriate prescribing of pregabalin and highlight the potential for misuse, abuse or dependence with this medicine (Medicines Management Programme, 2020). The Working Group fully supports the production of these resources in supporting prescribers.

7.2 Resources for GPs

In addition, resources for GPs and community pharmacists (poster and patient information leaflet) were developed in 2020 and updated in 2023, and are also available on the MMP website. The resources were developed by the HSE in collaboration with the Medical Council, ICGP, DoH, PSI, HPRA and the NMBI. This campaign is aimed at raising public awareness of the potential harms associated with benzodiazepines and z-drugs use and to support prescribers in discussing the use of these medicines with their patients. The resources were distributed to GP practices and community pharmacies in February 2023.

The *Management of Benzodiazepines and Z-drugs Training Programme*[16] is an online and self-directed training programme, designed and delivered by the Irish Institute of Pharmacy (IIOP) in conjunction with the MMP and the ICGP. The programme is available to pharmacists on the IIOP website and to GPs on the ICGP website. The aim of the programme is to educate healthcare professionals on the appropriate prescribing and use of benzodiazepines and z-drugs, the legislation pertaining to these medicines and implications on their management in practice. Additional resources for training can be viewed in Appendix 6.

[16] https://www.icgp.ie/go/courses/addiction_management_in_primary_care/education/management_of_benzodiazepines_z_drugs#:~:text=Course%20content%20will%20include%20examination,benzodiazepines%20and%20z%2Ddrugs%2C%20and

8. Conclusion and recommendations

8.1 Concluding Comments

The Working Group has delved into the critical issue of patient safety concerning the overprescribing and inappropriate prescribing of benzodiazepines, z-drugs, and gabapentinoids. While current literature often focuses on incidence rates related to intentional drug overdose, this Working Group advocates for a more nuanced understanding of patient safety issues, and this specific issue could be considered by an implementation group. By exploring various practice settings such as hospitals, primary care, and residential care, as well as dissecting patient cohorts (including older individuals, those with drug dependencies, and new patients with anxiety or pain) targeted solutions can be identified. The Working Group highlights the importance of tailored approaches, emphasising the significance of services like pain clinics, mental health, and addiction services, as well as the necessity of medicines reconciliation and review in primary and secondary care settings and during care transitions. The Working Group has identified the need for a detailed analysis concerning different practice settings and patient cohorts in order to recommend comprehensive solutions.

The Working Group also highlighted the importance of data and benefits of being able to use data collected to identify trends. The data from the Medical Council is useful in identifying estimates of complaints related to overprescribing but also highlights the benefits of continued improvements to data capture and efforts to triangulate various data sources in order to continue to build insights into important patient safety issues. The data collected from the PCRS is invaluable for identifying overprescribing trends in public prescribing, however without access to private prescribing data trends, the picture is not complete. Access to full prescribing data of these drugs would allow for targeted inventions such as support for prescribers on reduction guidance and addiction specialists to advise patients, and in more extreme cases referral to the Medical Council to address patient safety concerns.

The Working Group recognises the positive downward trends in some of the data regarding the prescribing of benzodiazepines and z-drugs and also acknowledges the wider societal issues involved in that the misuse of these drugs is sometimes down to illegal supply as set out above. However, the Working Group is of the opinion that despite the work achieved so far, there are a number of areas that need to ensure appropriate initiation and prescribing of benzodiazepines, z-drugs, and gabapentinoids. The Working Group recognises the gravity of the overprescribing of these and its impact on patient safety.

The prescribing of benzodiazepines, z-drugs, and gabapentinoids, are significantly influenced by wider societal issues. One of the key factors is the prevalence of mental health disorders and the increasing societal stressors, leading to a higher demand for these medications. However, the over prescription of these drugs often results in dependence, addiction, and adverse health outcomes, exacerbating the societal issues they were initially intended to alleviate. In December 2023 (last available month at the time of drafting this report) 13,580 people were on a waiting list for an outpatient care in pain relief. A further 5,775 were waiting day case care and 13 were waiting for inpatient care.[17] Of the people waiting for outpatient care, 3,559 people had been waiting more than 12 months.[18] Addressing these wider societal issues through proposed reforms, improved access to mental health services, and better education for both healthcare providers and patients is essential to mitigate the inappropriate prescribing of these medications and their associated negative impacts on individuals and communities.

The recommendations set out in the final section of this report, when implemented, aim to address this issue comprehensively, with an emphasis on education, improved service delivery, legislative changes, and the establishment of an implementation group to oversee these efforts.

The report notes the limitation in focusing solely on GP prescribing. It acknowledges the contributions of doctors in hospital settings, particularly in mental health services, in prescribing benzodiazepines and z-drugs. The report also highlights the challenge of obtaining accurate data on hospital-initiated prescriptions. The ultimate goal is to enhance patient safety and reduce the harm associated with benzodiazepine, z-drug and gabapentinoid use.

8.2 Recommendations

The Working Group's recommendations aim to address the issue comprehensively, with an evidence-based approach.

1. Improved Service Delivery

The Working Group, recognising that there is a lack of publicly funded counselling services available in Primary Care and insufficient resourcing of pain management clinics, recommends increased resources for Primary Care counselling supports and for addiction services. These additional resources should be particularly around benzodiazepine, z-drug and gabapentinoid dependence, including Counselling Services (aligned with Sharing the Vision, Ireland's national mental health policy, and Connecting for Life, Ireland's suicide and self-harm reduction strategy) and Addiction

[17] https://www2.hse.ie/services/waiting-times/national/
[18] https://www2.hse.ie/services/waiting-times/outpatient-waiting-times/

Services. Appropriate access to Counselling services in Primary Care would reduce the number of people requiring prescriptions for these medications. Patients who become dependent upon these drugs should be offered a referral to appropriate community based drug treatment services and provided with appropriate supports.. Additionally, there should be appropriate resourcing of all prescribers; doctors, registered nurses, registered midwives, to support patients to reduce their consumption of these drugs.

2. Education

Further educational initiatives should be developed for doctors, pharmacists, and the public to increase awareness of the risks associated with benzodiazepine, z-drug and gabapentinoid use. Collaborative efforts with organisations such as the ICGP, the College of Psychiatrists of Ireland and the PSI are encouraged. Additionally, it is suggested that practitioners be signposted to and encouraged to complete existing programmes already in place. The Working Group are of the opinion that training and awareness around overprescribing matters should be a focus of pre-registration education and training of all prescribers.

The Working Group recommends a public education campaign to highlight the dangers of benzodiazepines, z-drugs, and gabapentinoids to be highlighted with a focus on resources available for patients e.g. www.yourmentalhealth.ie. All parties involved should be engaged in ongoing education and feedback to doctors on emerging trends, appropriate prescribing of benzodiazepines, z-drugs, and gabapentinoids, with a view to lowering initiation rates.

3. Advancing Transparency in Prescribing Practices

One of the main areas still to be addressed is the lack of a visibility of private prescribing of controlled drugs. It is proposed that a **central repository for data** should be established which would be accessible as appropriate to different bodies however it is acknowledged that there a number of barriers to the establishment of such a database. The current database for public prescribing data is not extendable to the private data collection and an equivalent system would require technological advances, along with the designation of an appropriate body to store and release this data. Furthermore there are data protection issues which would need thorough consideration.

Any future advances in the health service technologies that could enable better transparency in relation to prescribing practices should be harnessed, where possible, to achieve greater accountability and improve prescribing practices, while ensuring data protection obligations are adhered to.

The importance of development of a national prescribing solution for Ireland would be a useful step. The group supports the development of the National Shared Care Record[19] programme, which will be another project that will provide greater visibility to health professionals on use of these medicines.

The data protection obligations on a prescriber with respect to private patients to ensure they conform with data protection legislation are such that a significant volume of prescribing could not be factored into the working group's investigations, which in turn affected the overall picture of over-prescribing across the system.

4. Consideration given to including Pregabalin and Gabapentin in the Controlled Drugs List.

The Working Group consider that additional safeguards be put in place as a result of concerns around the misuse of these drugs. In response to the concerns regarding pregabalin and gabapentin, the Working Group supports the idea of consideration to be given to including pregabalin and gabapentin to the controlled drugs list, as has been done in other countries, such as the UK. However, the Working Group acknowledge that this this alone may not be enough, improved service delivery as discussed above is crucial to ensuring this reclassification has the desired impact on prescription rates and adverse impacts of this drug.

5. Implementation of Recommendations of the Working Group

The successful implementation of the recommendations outlined will require considerable stakeholder involvement across the Irish healthcare system in order to be effective. The Working Group recommends the establishment of an implementation group to assess progress on the implementation of the recommendations within this report. Particular members of this Working Group would be well informed to contribute to any implementation group established.

[19] National Shared Care Record - eHealth Ireland

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10. Appendices

Appendix 1: Membership of Working Group

The Working Group began with a small number of stakeholders and after some initial meetings the Group's membership expanded to included representatives from the HSE, (Addiction Services, Primary Care Reimbursement Service, Medicine Management Programme, Nurse and Midwife Medicinal Product Prescribing), Department of Health (Controlled Drugs & Pharmacy Legislation Unit & National Patient Safety Office), the Pharmaceutical Society of Ireland (PSI), Irish College of General Practitioners (ICGP), Nursing and Midwifery Board of Ireland (NMBI), Health Products Regulatory Authority (HPRA), the Irish College of Psychiatry, the Faculty of Pain Medicine (College of Anaesthesiologists of Ireland). There are also a number of individual GPs and Pharmacists who have attended periodically in the past when available. Meetings are held quarterly and remotely (since 2020).

Appendix 2: Pharmacological Information

Benzodiazepines are a group of prescription drugs which act on the central nervous system (CNS) to enhance the effect of the neurotransmitter gamma-aminobutyric acid (GABA) at the GABA-A receptors in the brain. GABA is the most common inhibitory neurotransmitter in the CNS and due to its inhibitory nature, it reduces neuron excitability, producing a calming effect (Hollister et al., 1993; Medicines Management Programme, 2021). There are currently twelve benzodiazepines licensed for the treatment of anxiety and/or insomnia available on the Reimbursable List. These are alprazolam, bromazepam, chlordiazepoxide, clobazam, diazepam, flurazepam, lorazepam, , nitrazepam, prazepam, temazepam and triazolam.

Z-drugs differ structurally from benzodiazepines; however they have the same pharmacological properties. Like benzodiazepines, they are GABA-receptor agonists and therefore enhance GABA-mediated neuronal inhibition., leading to sedative and hypnotic effects. Z-drugs have a relatively short half-life, which means they do not stay in the body for an extended period. This property is desirable for medications used to help people fall asleep, as it reduces the risk of next-day sedation.

Pregabalin exerts its therapeutic effects by binding to the alpha-2-delta subunit of voltage-gated calcium channels in the central nervous system. This binding modulates calcium influx at nerve terminals, inhibiting the release of several neurotransmitters, including glutamate, norepinephrine, and substance P. By reducing the release of these neurotransmitters, pregabalin helps in controlling pain signals and epileptic discharges. The half-life of pregabalin is about 6.3 hours. Pregabalin can lead to the development of tolerance with prolonged use, requiring dose escalation to maintain the same therapeutic effect. Abrupt discontinuation may result in withdrawal symptoms, so it should be tapered off under medical supervision.

Gabepentin[20] belongs to a group of medicines used to treat epilepsy and peripheral neuropathic pain (long lasting pain caused by damage to the nerves). Various forms of epilepsy (seizures that are initially limited to certain parts of the brain, whether the seizure spreads to other parts of the brain or not). Your doctor will prescribe Gabapentin for you to help treat your epilepsy when your current treatment is not fully controlling your condition. You should take Gabapentin in addition to your current treatment unless told otherwise. Gabapentin can also be used on its own to treat adults and children over 12 years of age. A variety of different diseases can cause peripheral (primarily occurring in the legs and/or arms) neuropathic pain, such as diabetes or shingles. Pain sensations

[20] https://www.hpra.ie/img/uploaded/swedocuments/1653bc4f-bcbc-451c-9b7f-e2cbef6eefcf.pdf

may be described as hot, burning, throbbing, shooting, stabbing, sharp, cramping, aching, tingling, numbness, pins and needles etc.

Appendix 3: Schedule 8 (Misuse of Drugs Regulations, 2017)

SCHEDULE 8

DRUGS WHICH PRACTITIONERS WHO ARE REGISTERED NURSES OR REGISTERED MIDWIVES MAY PRESCRIBE WITHIN SCHEDULES 2 AND 3

PART 1

Drugs for pain relief in hospital

Drug	Route of administration
Buprenorphine	Transdermal
Codeine phosphate	Oral
Dihydrocodeine	Oral
Fentanyl	Intranasal, intravenous, transdermal, transmucosal, subcutaneous, sublingual/buccal
Morphine sulphate	Intramuscular, intravenous, oral, subcutaneous
Morphine tartrate	Intramuscular, intravenous, subcutaneous
Oxycodone	Oral, subcutaneous, intravenous
Pethidine	Intramuscular, intravenous, subcutaneous

PART 2

Drugs for palliative care

Drug	Route of administration
Buprenorphine	Transdermal
Codeine phosphate	Oral
Fentanyl	Intranasal, Intravenous, transdermal, transmucosal, subcutaneous, sublingual/buccal
Hydromorphone	Oral, subcutaneous
Methylphenidate	Oral
Morphine sulphate	Intramuscular, oral, subcutaneous
Morphine tartrate	Intramuscular, subcutaneous
Oxycodone	Oral, subcutaneous

PART 3

Drugs for purposes of midwifery

Drug	Route of administration
Pethidine	Intramuscular

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PART 4

Drugs for neonatal care

Drug	Route of administration
Fentanyl	Intravenous, transdermal, transmucosal
Morphine sulphate	Intramuscular, intranasal, intravenous, oral, subcutaneous
Morphine tartrate	Intramuscular, intravenous, subcutaneous

PART 5

Drugs for use in mental health or intellectual disability

Drug	Route of administration
Methylphenidate	Oral

Appendix 4: Prescribing Data

PCRS pharmacy reported data for the most commonly prescribed benzodiazepines and z-drugs (diazepam, alprazolam, zopliclone and zolpidem) for the period between 2018- 2022 shows that the 75-79 years of age and over 80s age groups have a higher percentage of dispensing of these drugs under their medical card than those in lower age categories (when age groups are combined).

Figure 1. *Number of unique people (as a percentage) dispensed Diazepam and Alprazolam under GMS in 2018.*

Age Groups		6 - 11 years	12 - 17 years	18 -24 years	25 -74 years	75 -79 years	80 + over years	Grand Total
No. of People Eligible for Medical Cards as at 31 December 2018		141,574	136,827	91,796	861,086	95,646	139,547	1,466,476
No. of Unique People prescribed Listed ATC Medication 2018								
ATC No.	ATC Description	6 to 11 years	12 to 17 years	18 to 24 years	25 to 74 years	75 to 79 years	80 + over years	Grand Total
N05BA01	Diazepam	194	605	2,629	67,837	5,814	7,947	85,026
		0.14%	0.44%	2.86%	7.88%	6.08%	5.69%	5.80%
N05BA12	Alprazolam	43	241	2,319	53,738	6,551	11,854	74,746
		0.03%	0.18%	2.53%	6.24%	6.85%	8.49%	5.10%

Figure 2. *Number of unique people (as a percentage) dispensed Diazepam and Alprazolam under GMS in 2022*

Age Groups		6 - 11 years	12 - 17 years	18 -24 years	25 -74 years	75 -79 years	80 + over years	Grand Total
No. of People Eligible for Medical Cards as at 31st Dec 2022		134,110	141,365	80,863	866,878	109,898	153,379	1,486,493
No. Unique People prescribed Listed ATC Medication 2022								
ATC Code	ATC Descriptio	6 to 11 years	12 to 17 years	18 to 24 years	25 to 74 years	75 to 79 years	80 +over years	Grand Total
N05BA01	Diazepam	169	469	1,773	62,662	6,272	7,994	79,339
		0.13%	0.33%	2.19%	7.23%	5.71%	5.21%	5.34%
N05BA12	Alprazolam	18	180	1,519	49,150	7,013	11,530	69,410
		0.01%	0.13%	1.88%	5.67%	6.38%	7.52%	4.67%

The attached tables provide the proportion of patients within the various age groups who have medical card eligibility. There are a greater number of people with medical card eligibility in 2022 vs 2018. Therefore, whilst the percentage in the 75-79 years and over 80s age categories looks to be smaller in 2022, the number of patients prescribed the drugs isn't significantly different.

The information provided is based on claim data which has been received by the PCRS from Community Pharmacists and includes items reimbursed by PCRS only under the GMS scheme. The data does not capture items dispensed outside of Community Drug Schemes where the prescription

has been paid for privately by the patient or patient representative. Furthermore, PCRS does not capture data in relation to diagnosis or indication.

Figure 3. *Number of unique people (as a percentage) dispensed Pregabalin under GMS in 2018.*

Age Groups		6 - 11 years	12 - 17 years	18 -24 years	25 -74 years	75 -79 years	80 + over years	Grand Total
No. of People Eligible for Medical Cards as at 31 December 2018		141,574	136,827	91,796	861,086	95,646	139,547	1,466,476
No. of Unique People prescribed Listed ATC Medication 2018								
ATC No.	ATC Description	6 to 11 years	12 to 17 years	18 to 24 years	25 to 74 years	75 to 79 years	80 + over years	Grand Total
N02BF02	Pregabalin	25	104	980	53,775	7,953	13,010	75,847
		0.02%	0.08%	1.07%	6.25%	8.32%	9.32%	5.17%

Figure 4. *Number of unique people (as a percentage) dispensed Pregabalin under GMS in 2022.*

Age Groups		6 - 11 years	12 - 17 years	18 -24 years	25 -74 years	75 -79 years	80 + over years	Grand Total
No. of People Eligible for Medical Cards as at 31st Dec 2022		134,110	141,365	80,863	866,878	109,898	153,379	1,486,493
No. Unique People prescribed Listed ATC Medication 2022								
ATC Code	ATC Descriptio	6 to 11 years	12 to 17 years	18 to 24 years	25 to 74 years	75 to 79 years	80 +over years	Grand Total
N02BF02	Pregabalin	23	64	552	48,212	8,158	13,034	70,043
		0.02%	0.05%	0.68%	5.56%	7.42%	8.50%	4.71%

There appears to be a reduction in the dispensing of pregabalin under GMS from 2018 to 2022. The data does not capture items dispensed outside of Community Drug Schemes where the prescription has been paid for privately by the patient or patient representative.

Appendix 5: Medical Council Press Release

Medical Council Warns Doctors to Reduce Over-Prescribing of Benzodiazepines, Z-drugs and Pregabalin or face Potential Investigation

Thursday, 19th September 2019: The Medical Council has today issued advice to all doctors prescribing benzodiazepines, z-drugs and Pregabalin to follow best practice guidelines and to only prescribe benzodiazepines or similar drugs when absolutely required.

The Medical Council, with its dual role of protecting patients and supporting doctors, takes a very serious view of over-prescribing of benzodiazepines, z-drugs and Pregabalin and is actively working with the HSE, the Department of Health, the Pharmaceutical Society of Ireland and the medical profession to take action on this issue on a national level.

If necessary, in order to protect the public, the Medical Council will take disciplinary action against medical practitioners in relation to the over-prescribing of benzodiazepines, z-drugs and Pregabalin.

Benzodiazepines are a group of medicines that can be prescribed for short periods to help with sleeping problems, or to help with episodes of severe anxiety. They are not for long-term use and can be dangerous when a patient develops an overreliance or a dependency on these drugs.

The President of the Medical Council, Dr Rita Doyle, said: "The impact of inappropriate prescribing of benzodiazepines, z-drugs, and pregabalin and other controlled drugs is having a significant impact on patient safety and wellbeing. While benzodiazepines may have a role in the treatment of a patient on a time-limited basis, caution and strict monitoring are required when they are prescribed. Patients who become dependent upon benzodiazepines should be referred to the appropriate drug treatment services and provided with appropriate supports."

"As a Council, we acknowledge and appreciate the challenges faced by practitioners, the difficulties some practices are experiencing in terms of benzodiazepine and z-drug usage, and the demands from some patients for this and similar types of medication."

"If a doctor is facing challenges in prescribing these medications, I would strongly encourage them, as a matter of priority, to engage with the HSE Addiction Services for support and guidance. The Medical Council supports doctors who follow recognised professional guidelines in line with professional practice and supports examples of good practice, particularly in difficult circumstances."

"Any doctor whose level of prescribing is above the normal range, and who is not working in an exceptional area of practice, and who does not make any effort to refer their patients to support or reduce their high-prescribing levels may require formal investigation by the Medical Council."

"However, it is vitally important that any patient who is taking benzodiazepines or z-drugs does not stop taking them without advice and guidance from their doctor."

“Doctors have a very clear ethical responsibility with regard to the safe prescribing of these types of drugs as set out in the Medical Council’s Guide to Professional Conduct and Ethics for Registered Medical Practitioners.”

“By working in collaboration with the HSE, the Department of Health, the profession and other key stakeholders, the Medical Council and our partners are addressing a key patient safety issue and ensuring that doctors have the supports they need to protect patient safety,” concluded Dr Doyle.

The Medical Council’s Guide to Professional Conduct and Ethics for Registered Medical Practitioners clearly sets out the responsibilities of doctors in section 42.7:

“You must be aware of the dangers of drug dependency when prescribing benzodiazepines, opiates and other drugs with addictive potential. You should refer patients with drug dependencies to the appropriate drug treatment services and supports unless you have appropriate training, facilities and support yourself. You should not undertake treatment of opiate dependency unless you have been approved under the Methadone Treatment Protocol. You should safeguard patients with drug dependencies by taking reasonable steps to make sure that they are not inappropriately obtaining drugs from multiple sources. You can do this, for example, by liaising with drug treatment services, other doctors and pharmacists.”

When prescribing a controlled drug for a patient a doctor must:

- Provide a valid prescription which meets the requirements of the legislation
- Be satisfied as to the identity of the person for whose treatment the prescription is to be issued
- Follow relevant national and international prescribing guidelines
- Within reason, be available to confirm or discuss any matters related to the prescription and the patient
- Ensure the safe-keeping of prescription pads to reduce the risk of theft and forgery
- Facilitate appropriate withdrawal of controlled drugs and follow-up and refer as necessary

Doctors must also take additional care when considering prescribing benzodiazepines for patients in “at risk” groups or those with additional care requirements.
Examples include:

- Patients with drug dependency issues
- Patients receiving addiction treatment services
- Patients under the management of multiple doctors
- Patient population who attend pain clinics
- Patients transitioning from one place of care to another
- Patients in residential care settings
- Patients at risk of developing sleep disordered breathing

- Prisoners
- Patients with mental health issues
- Patients with a history of self-harm
- Homeless patients
- Patients with additional care requirements
- Patients with poor health literacy or patients who don't have English as their first language
- Paediatric patients
- Older people
- Pregnant/breast feeding women
- Patients with physical/intellectual disabilities
- Patients suffering from chronic illnesses
- Patients receiving palliative care

ENDS

Appendix 6: Resources to Support Prescribers

Management of Benzodiazepines and Z-drugs Training Programme.

This is an interactive on-line training programme which was designed in collaboration with the HSE Medicines Management Programme and the IIOP (Irish Institute of Pharmacy). GPs and GP trainees can engage with it in their own time and get CPD credits for it. This incorporates the most up to date guidelines on benzodiazepine management and detox recommendations- an excellent resource.

Foundation Course in Substance Misuse.

Benzodiazepines management is included in this programme and in the documentation that accompanies this programme. This is an on-line training programme available free of charge, to all GPs and GP trainees. CPD credits are available on completion of the course and in addition this training is recognised training if a GP wishes to take up a HSE contract for methadone prescribing; this contract is now known as an Opiate Substance Treatment (OST) contract.

Webinars & conferences:

As part of the monthly ICGP Education programme, the management of benzodiazepine prescribing is a topic for discussion. The ICGP regularly have a therapeutics topic at their conferences.

'Better, safer prescribing: therapeutics in GP[21]:

This course deals with the complexity of therapeutics, signposting to specific resources of most benefit for doctor and patient alike. Topics will address the need to reduce unnecessary medication burden, adverse drug reactions and interactions leading to positive outcomes for patients. The modular approach provides a GP friendly and accessible platform with an option to complete the entire course or to choose specific modules during the year. Each module attracts 4 CPD credits and 0.5 day GMS study leave. This course will address, among other topics, appropriate use of BZRA, opiates, gabapentanoids. This course will also address deprescribing, using the validated NHS Scotland 'Seven Steps Medication Review'.

[21] https://www.icgp.ie/go/courses/courses/better_safer_prescribing

Appendix 7: List of Acronyms Used in the Report

ADR	Adverse Drug Reaction
AGS	An Garda Síochána
BZRA	Benzodiazepines and Z-Drugs
CHO	Community Health Organisations
CNS	Central Nervous System
CPD	Continuing Professional Development
CPI	College of Psychiatry of Ireland
DOH	Department of Health
DPS	Drug Payment Scheme
EMCDDA	European Monitoring Centre for Drugs and Drug Addiction
EWET	Early Warning Emerging Trends
FtPC	Fitness to Practise Committee
GABA	Gamma-aminobutyric acid
GAD	Generalised Anxiety Disorder
GMS	General Medical Service
GP	General Practitioner
HPRA	Health Products Regulatory Authority
HRB	Health Research Board
HSE	Health Service Executive
ICGP	Irish College of General Practitioners
IIOP	Irish Institute of Pharmacy
LTI	Long Term Illness
MDA	Misuse of Drugs Act
MP	Midwife Prescriber
MMP	Medicines Management Programme
NDRDI	National Drug Related Deaths Index
NDTRS	National Drug Treatment Reporting System
NHQRS	National Healthcare Quality Reporting System
NI	Northern Ireland
NICE	National Institute for Health and Care Excellence
NIRSA	Northern Ireland Statistics and Research Agency
NMBI	Nursing and Midwifery Board of Ireland
NPSO	National Patient Safety Office
NSHRI	National Self-Harm Registry Ireland
OECD	Organisation for Economic Co-operation and Development
OST	Opiate Substance Treatment
PCRS	Primary Care Reimbursement Service
PMR	Patient Medication Record
PPC	Preliminary Proceedings Committee
PPPG	Policies Procedures Protocols Guidelines
PSI	Pharmaceutical Society of Ireland
ROI	Republic of Ireland
RN	Registered Nurse
SNRI	Serotonin and Norepinephrine Reuptake Inhibitor
SSRI	Selective Serotonin Reuptake Inhibitor
WHO	World Health Organisation