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Research and analysis

Prescribed medicines review: summary

Updated 3 December 2020

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1. Introduction

In 2017, the minister for public health and primary care commissioned Public Health England (PHE) to identify the scale, distribution and causes of prescription drug dependence, and what might be done to address it.

The review covered adults (aged 18 and over) and 5 classes of medicines:

- benzodiazepines (mostly prescribed for anxiety)
- z-drugs (sleeping tablets with effects similar to benzodiazepines)
- gabapentin and pregabalin (together called gabapentinoids and used to treat epilepsy, neuropathic pain and, in the case of pregabalin, anxiety)
- opioids for chronic non-cancer pain
- antidepressants

The National Institute for Health and Care Excellence (NICE) first mapped out all the medicines prescribable in England in these classes, so it was clear which were to be included.

This was a mixed-methods public health evidence review, including:

- an analysis by PHE of all NHS community prescriptions in England reported to the NHS Business Services Authority during the period 2015 to 2018 (patient-linked data only available since 2015), supplemented by some longer-term prescription data that could better indicate trends, and data on medicines supplied in other settings
- an independently commissioned rapid evidence assessment (REA) of articles on prescription medicine-associated harms, dependence, withdrawal, risk factors and service models published between 2008 and 2018, and of documents submitted in an open public call-for-evidence which summarises patients' experiences of taking these medicines and of treatment services

An expert reference group advised on methods and discussed findings and recommendations.

2. Findings from the analysis of prescription data

2.1 Prevalence

PHE's analysis shows that, in 2017 to 2018, 11.5 million adults in England (26% of the adult population) received, and had dispensed, one or more prescriptions for any of the medicines within the scope of the review[footnote 1]. The totals for each medicine were:

- antidepressants 7.3 million people (17% of the adult population)
- opioid pain medicines 5.6 million (13%)
- gabapentinoids 1.5 million (3%)
- benzodiazepines 1.4 million (3%)
- z-drugs 1.0 million (2%)

There are large variations in the standardised rates of prescribing across clinical commissioning groups (CCGs).

2.2 Trends and demographics

Between 2015 to 2016 and 2017 to 2018 the rate of prescribing for antidepressants increased from 15.8% of the adult population to 16.6% and for gabapentinoids from 2.9% to 3.3%.

There was a small decrease in prescribing rates for the other 3 medicine classes.

Rates of prescribing were higher for women (1.5 times those of men), and the rates generally increased with age.

After a long increasing trend, the annual number of prescriptions for opioid pain medicines has slightly decreased since 2016.

There is a continuing longer-term fall in prescription numbers for benzodiazepines. A longer-term increase in annual prescription numbers for z-drugs started to reverse in 2014.

2.3 Associations with deprivation

Prescribing rates for opioid pain medicines and gabapentinoids had a strong association with deprivation, being higher in areas of greater deprivation. Antidepressant prescribing had a weaker association with deprivation. For benzodiazepines and z-drugs, prescribing rates slightly decreased with higher deprivation. For all medicine classes the proportion of patients who had at least a year of prescriptions increased with higher deprivation.

2.4 Time receiving prescriptions

Most patients who started a prescription in June 2015 were estimated to have received a prescription for 3 months or less. This ranged from 51% for antidepressants to 82% for benzodiazepines.

The proportion estimated to have received a prescription continuously from June 2015 for at least 12 months varied from 5% (benzodiazepines) to almost 20% (gabapentinoids). These proportions were similar, at 4% and 19% respectively, for those starting a prescription in June 2017, the latest date at which 12-month duration could be estimated prospectively. This suggests that most people who start prescriptions receive them for a short time, but each month there is a group of patients who continue to receive a prescription for longer.

Looking retrospectively at people receiving a prescription in March 2018, around half of patients in each medicine class were estimated to have been receiving a prescription continuously for at least 12 months at that point. This proportion is much higher than for those starting a prescription in June 2015 as it reflects an accumulation of people who have long-term prescriptions, some of whom started prescriptions more recently, but many of whom were already receiving prescriptions by April 2015.

The number of patients who received a prescription continuously between April 2015 (and perhaps earlier) and March 2018 was as follows:

- antidepressants 930,000 people
- opioid pain medicines 540,000
- gabapentinoids 160,000
- benzodiazepines 120,000
- z-drugs 100,000

3. Findings from the rapid evidence assessment

The REA identified 75 articles which included:

- 30 on harms
- 26 on interventions
- 17 on risk factors
- 2 on patients' experiences

From the open call-for-evidence, the researchers included 10 more reports on patients' experiences and 4 reports on current practice.

3.1 Dependence, withdrawal and interventions

Benzodiazepines, z-drugs, opioid pain medicines and gabapentinoids are associated with a risk of dependence and withdrawal.

Antidepressants are associated with withdrawal. Seventeen placebo-controlled trials (with 6,729 participants) looked at withdrawal symptoms that might follow when patients stop taking medication, such as insomnia, depression, suicidal ideation and physical symptoms. The evidence here was mostly very-low to moderate quality. Only one trial was high quality.

Interventions for treating dependence and managing withdrawal varied widely, and meta-analysis, or combining data from the studies, was not feasible. The evidence here came from 26 trials and 2 non-randomised studies: 12 on opioids, 8 benzodiazepines, 3 antidepressants, one z-drugs and 4 on several drugs.

3.2 Patients' experiences

Some patients reported harmful effects and withdrawal symptoms on stopping benzodiazepines, z-drugs, opioids and antidepressants which affected their well-being, personal, social and occupational functioning. These effects and symptoms could last many months.

Higher initial opioid doses and prior mental health problems were associated with long-term use of opioids and opioid dependence, respectively. Prescribing opioid pain medicines for longer than 90 days was associated with opioid overdose and dependence.

Low income and use of shorter-acting benzodiazepines are associated with long-term benzodiazepine use.

Patients experienced barriers to accessing and engaging in treatment services. They felt there was a lack of information on the risks of medication and that doctors did not acknowledge or recognise withdrawal symptoms.

Patients described not being offered any non-medicinal treatment options, their treatment not being reviewed sufficiently and a lack of access to effective management and NHS support services.

3.3 Service models

The evidence submitted was not enough for conclusions on the effectiveness and cost-effectiveness of service models.

Common features of service models submitted were:

- the involvement of GPs and other primary care services
- helpline and telephone support
- counselling and support groups

4. Conclusions

In England in the year 2017 to 2018, 1-in-4 adults in England were prescribed benzodiazepines, z-drugs, gabapentinoids, opioids for chronic non-cancer pain, or antidepressants. Prescriptions for antidepressants and gabapentinoids are increasing, but prescriptions for opioid pain medicines are decreasing, after rising for many years. Prescriptions for benzodiazepines continue to fall, and those for z-drugs have more recently started to fall.

There is a higher rate of prescribing to women and older adults, and there are large variations in standardised rates of prescribing at the level of CCGs. The rate of prescribing and the time receiving a prescription increase with deprivation.

Longer-term prescribing is widespread. Aside from antidepressants, the medications reviewed are all licensed and indicated for (usually) short-term treatment of acute conditions. Clinical guidelines specify that benzodiazepines should not usually be prescribed for longer than 2 to 4 weeks.

Long-term prescribing of opioids for chronic, non-cancer pain is not effective for most patients. And some patients need long-term prescribing of antidepressants to maintain benefit and prevent relapse.

Effective, personalised care should include shared decision-making with patients and regular reviews of whether treatment is working. Patients who want to stop using a medicine must be able to access appropriate medical advice and treatment and must never be stigmatised.

Inappropriate limiting of medicines may increase harm, including the risk of suicide, and lead some people to seek medicines from illicit or less-regulated sources, such as online pharmacies. There needs to be increased public and clinical awareness of other interventions, such as cognitive behavioural therapy.

There have been very few high-quality research studies on medicine dependence and withdrawal, and their prevention and treatment, in the past 10 years.

5. Recommendations

PHE's recommendations fall into 5 broad categories which are:

1. Increasing the availability and use of data on the prescribing of medicines that can cause dependence or withdrawal to support greater transparency and accountability and help ensure practice is consistent and in line with guidance.
2. Enhancing clinical guidance and the likelihood it will be followed.
3. Improving information for patients and carers on prescribed medicines and other treatments, and increasing informed choice and shared decision-making between clinicians and patients.

4. Improving the support available from the healthcare system for patients experiencing dependence on, or withdrawal from, prescribed medicines.
5. Further research on the prevention and treatment of dependence on, and withdrawal from, prescribed medicines.

The goal is to make sure that our healthcare system builds awareness and enhanced decision-making for better patient treatment and support.

These recommendations are just the beginning. All parts of the healthcare system and the general population will need to engage with this complex problem and work together to find solutions. The local strategic leadership of CCGs, sustainability and transformation partnerships and integrated care systems will be vital.

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1. Other than opioid prescriptions for cancer pain, which were excluded as far as possible through a match to the National Cancer Registration Dataset, it was not possible to identify the conditions for which these medicines were prescribed, as conditions are not recorded in prescription data.

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