

NICE implementation uptake report: insomnia - newer hypnotic drugs

NICE implementation uptake reports provide information on national trends and activity associated with technologies recommended in NICE guidance.

Overview

The long term downward trend in prescribing of benzodiazepines used as hypnotics continues, with a corresponding shift towards prescribing of Z-drugs. Both trends pre-date the publication of the NICE guidance.

However, the guidance anticipated a possible “reduction in the prescribing of hypnotics” and the rate of increase in the prescribing of Z-drugs stabilised following publication of the guidance (figure 1).

National prescriptions data indicate a slight shift towards shorter treatment duration. This is in line with the recommendation that hypnotics should be prescribed for short periods of time only.

Newer hypnotic drugs (mental health and behavioural conditions)

‘Guidance on the use of zaleplon, zolpidem and zopiclone for the short-term management of insomnia’ NICE technology appraisal 77 (April 2004).

NICE recommended that doctors should consider using non-medicine treatments, and then, if they think that a hypnotic medicine is the appropriate way to treat severe insomnia that is interfering with normal daily life, they

should prescribe one for only short periods of time and strictly according to the licence for the drug. Because there is no firm evidence of differences in the effects of zaleplon, zolpidem, zopiclone and the shorter-acting benzodiazepines, doctors should prescribe the cheapest drug, taking into account the daily dose required and the cost for each dose.

1. Prescriptions: England

This section provides a cost and volume analysis of drugs dispensed in the community for the British National Formulary paragraph 4.1.1 (Hypnotics) using data obtained from the Prescription Cost Analysis (PCA) system. All costs stated in this report are based on net ingredient cost (NIC).

In the 12 months to March 2006, 4.7 million items were dispensed for zaleplon, zolpidem and zopiclone (referred to as Z-drugs) at a cost of £13.5 million. For benzodiazepines used to treat insomnia (loprazolam, lormetazepam, nitrazepam, temazepam) 5.1 million items were dispensed at a cost of £8.8 million. Diazepam and lorazepam are benzodiazepines that are licensed in the treatment of insomnia and anxiety (BNF 4.1.2 Anxiolytics) but are not included in this analysis.

Table 1 gives a breakdown of the number of items and cost for hypnotics for the 12 months to March 2006.

Table 1 Drugs to treat insomnia dispensed in the community in England in the 12 months to March 2006, British National Formulary paragraph 4.1.1 (Hypnotics)

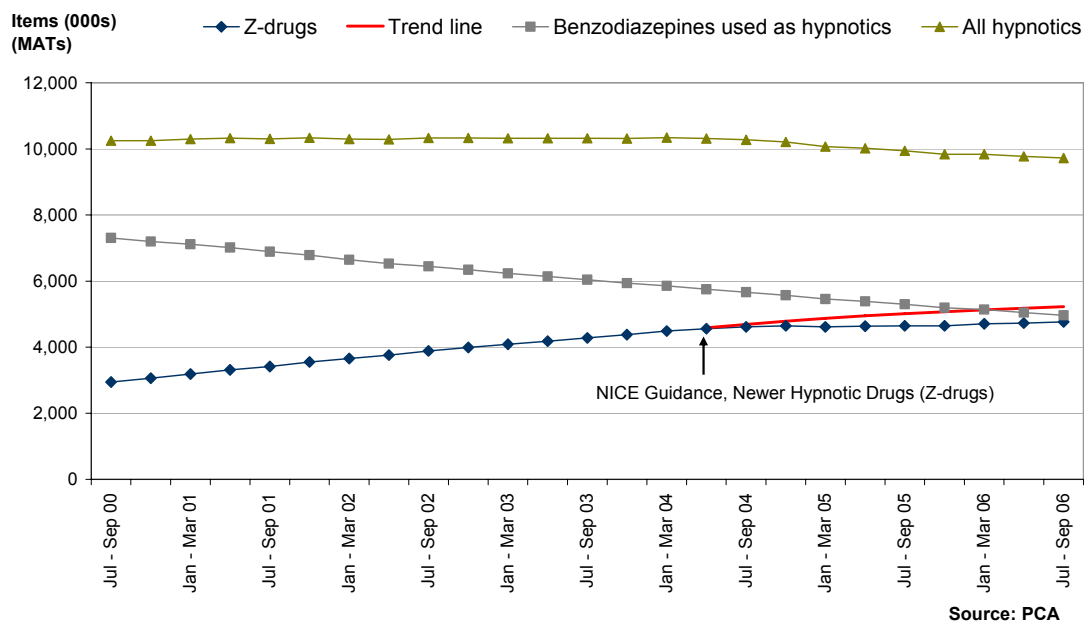
Drug	Prescription items (000s)	% of all items dispensed	Net ingredient cost (£000s)	Net ingredient cost per item (£)
Z-drugs				
Zopiclone	3,990	40.5%	10,957	2.7
Zolpidem	676	6.9%	2,291	3.4
Zaleplon	39	0.4%	220	5.6
Benzodiazepines used as hypnotics				
Temazepam	3,462	35.2%	4,000	1.2
Nitrazepam	1,400	14.2%	2,085	1.5
Lormetazepam	152	1.5%	2,039	13.4
Loprazolam	122	1.2%	683	5.6

Source: PCA

The adoption of Z-drugs over the last decade, predominantly zopiclone, combined with a corresponding trend in lower prescribing of temazepam and nitrazepam has meant that Z-drugs account for an increasing proportion of hypnotics prescribing.

Figure 1 shows trends in the total number of Z-drugs and benzodiazepine items dispensed in England. Following a long term upward trend in zopiclone items, the rate of increase reduced in the quarter April–June 2004 and stabilized until the first quarter of 2006 when a slight increase in the rate of prescribing was recorded. The number of zaleplon and zolpidem items dispensed decreased slightly over the two years to September 2006. Ongoing monitoring of hypnotics prescribing is required to establish the longer term trend.

Figure 1 Drugs for the treatment of insomnia dispensed in the community in England



Data are presented as Moving Annual Totals (MATs). The Moving Annual Total is the sum of the last four quarters.

We do not know the amount of hypnotics that are prescribed in the context of long- or short-term treatment. This is because national prescriptions data are not linked to patient information, i.e. it is not possible to know whether one or more prescriptions have been issued for the same person over a period of time.

We also do not know the actual treatment duration for a prescription and can only estimate the average treatment duration from the number of Average Daily Quantities (ADQs) per the number of prescriptions. Table 2 shows the total ADQs per the total number of items for primary care prescribing in England using data obtained from the ePACT system. Between 2002/03 and 2005/06 the typical duration for a prescription item (days) reduced by 2.70 for nitrazepam, 1.82 for temazepam and 2.28 for zopiclone. Based on the ADQs per item it is possible to infer that there has been a modest shift towards prescriptions for shorter treatment durations over the periods investigated. It is

important to note that there is limited data on treatment duration. The use of ADQs/Item as shown in table 2 is only intended to give an indicative measure.

Table 2 Estimated mean treatment duration (days) per prescription item for nitrazepam, temazepam and zopiclone between 2002/03 and 2005/05

Drug	ADQ Values (in 2005)	Mean treatment duration (days) per prescription		Change in mean treatment duration (days) between 02/03 and 05/06
		2002/03	2005/06	
Nitrazepam	5 mg	38.84	36.14	-2.70
Temazepam	20 mg	21.44	19.60	-1.84
Zopiclone	7.5 mg	23.86	21.58	-2.28

Source: ePACT.net

Mean treatment duration (days) per prescription = (ADQ usage/total items)

2. Analysis of a sample of anonymised patients records

National prescriptions data do not link to information on patients. Therefore, they cannot be used to provide prescribing information on age and sex. The Information Centre for health and social care completed an analysis of a sample of anonymised GP patient records data using the IMS Disease Analyzer. The analysis also sought to find out the age and sex distribution of patients issued with at least one prescription for zaleplon, zolpidem and zopiclone in the 12 months to 31 January 2006, regardless of whether a Read code for a diagnosis of insomnia was present in the patient record.

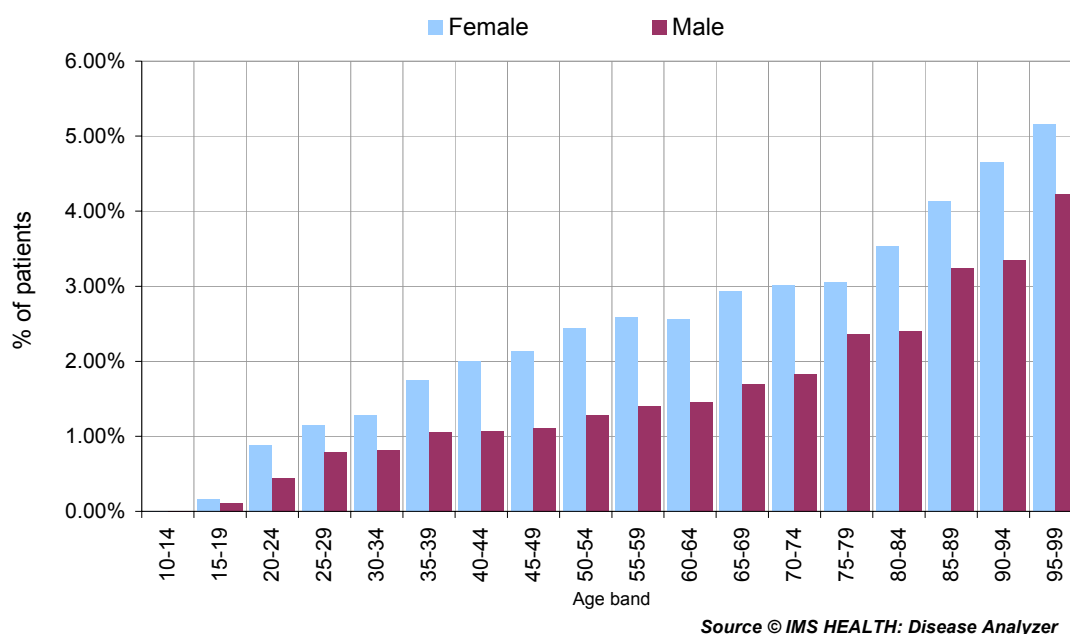
The analysis was based on 1,041,933 patients (in 130 practices), all available in their practice for the full 12 months to 31 January 2006.

Prescriptions

The analysis indicated that 1.40% (14,564) of all patients had been issued with at least one prescription for a Z-drug. Of these, 64.74% (9,429) were female. Figure 2 shows that prescriptions issued for Z-drugs increased with age. Zopiclone accounted for 83.42% of all prescriptions issued, zolpidem

15.27% and zaleplon 1.31%. These proportions are consistent with national prescriptions data.

Figure 2 Number of patients issued with at least one prescription for a Z-drug in the 12 months to 31 January 2006 as a % of all patients in the database by age and sex



Definitions of data used in this report

PCA

Prescription information is taken from the Prescription Cost Analysis (PCA) system, supplied by the Prescription Pricing Division of the NHS Business Services Authority, and is based on a full analysis of all prescriptions dispensed in the community, i.e. by community pharmacists and appliance contractors, dispensing doctors, and prescriptions submitted by prescribing doctors for items personally administered in England. Also included are prescriptions written in Wales, Scotland, Northern Ireland and the Isle of Man but dispensed in England. The data do not cover drugs dispensed in hospitals, including mental health trusts, or private prescriptions.

PACT

This information comes from the electronic Prescribing Analysis and Cost Tool (ePACT) system, which covers prescriptions prescribed by GPs and other non-medical prescribers in England and dispensed in the community in the UK. The Prescription Pricing Division of the NHS Business Services Authority maintains the system. PACT data are used widely in the NHS to monitor prescribing at a local and a national level. Prescriptions written in hospitals that are dispensed in the community (FP10 [HP]) are not included in PACT data. Prescriptions dispensed in hospitals or mental health units, and private prescriptions, are not included in PACT data.

Measures of prescribing

Volume: The basic measure of volume in PCA and PACT data is number of prescription items which refer to a single item on a prescription form.

Cost: The net ingredient cost (NIC) is the basic price of a drug listed in the drug tariff, or if not in the drug tariffs the manufacturer's list price.

Data limitations (national prescriptions)

PCA or PACT data do not link to demographic or to diagnosis information on patients. Therefore, they cannot be used to provide prescribing information on age and sex or for prescribing of specific conditions where the same drug is licensed for more than one indication.

IMS Disease Analyzer

IMS collects data from a sample of GP practice systems. Around 130 are currently delivering data and the database currently has about 2.6 million patient records 1.1 million of which are currently registered. These records are anonymised and are available for analysis via a tool called Disease Analyser.

The sample includes practices from England, Wales, Scotland and Northern Ireland and has a representative UK sample by age and sex.

Disease Analyzer data have been collected from a very stable panel over a period of more than 14 years. The database holds significant clinical events

relating to any period in a patient's life where summarised into computer records by the practice. As in any observational database, data entered by panel doctors may be incomplete.