

Research Letter

Hypnotic prescription without face to face contact: A report from french family medicine

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KEY MESSAGE:

- Hypnotic Z-drug prescription without face-to-face consultation was common
- Chronic illness, low socioeconomic status, age < 45 or > 65 years, and visiting a psychiatrist were associated with Z-drug prescription during a face-to-face consultation
- GPs from rural areas or with longer patient lists more often prescribed Z-drugs without a consultation

ABSTRACT

Background: Guidelines suggest a review of hypnotic prescriptions every four weeks for zopiclone, zolpidem and zaleplon ('Z-drugs'). The lack of face-to-face consultation between the physician and the patient increases the potential of misuse and resultant dependence.

Objectives: To determine the proportion of long-term hypnotic Z-drug prescription issued without face-to-face consultation, and factors associated with such practice.

Method: Audit based on an extract of data from the French health insurance database in two French departments. Long-term Z-drug prescriptions by general practitioners (GPs) were analysed over a one-year period, regardless of the association of the prescription with a reimbursed consultation. Main factors considered were patient characteristics (gender, age, socioeconomic status, suffering from a chronic disease) and physician characteristics (gender, age, location of the practice, patient list size).

Results: Overall, 67 256 long-term Z-drug prescriptions were reviewed. Of these, 23 107 (34.4%) were not associated with a consultation. Only 17% (95%CI: 16–18%) of long-term hypnotic consumers attended a consultation on all the dates noted on the prescription. Z-drug prescriptions were more likely to be prescribed in a consultation if the patient had a chronic illness ($P < 0.0001$), a low socioeconomic status ($P < 0.0001$), was less than 45 or over 65 years old ($P < 0.0001$), or visited a psychiatrist during the same year ($P < 0.0001$). Having a longer patient list or practising in a rural area were physician characteristics associated with non-adherent Z-drug prescription ($P < 0.0001$).

Conclusion: Prescribing Z-drug hypnotics without a face-to-face consultation was frequent, especially in middle-aged patients without co-morbidity who were not seen by a psychiatrist.

Keywords: hypnotics and sedatives, sleep initiation and maintenance disorders, drug prescriptions, guideline adherence, family practice

INTRODUCTION

French guidelines on hypnotic prescription do not differ from those from England or the United States, and promote a prescription review every four weeks for zopiclone, zolpidem and zaleplon (1). These so-called 'Z-drugs' are a group of non-benzodiazepine hypnotics with effects similar to benzodiazepines and whose names start with the letter 'Z'. Zaleplon belongs to the pyrazolopyrimidine

class, zolpidem to the imidazopyridine class, whereas zopiclone belongs to the cyclopyrrolone class of hypnotics. Inappropriate use of Z-drugs is well known, leading to dependence and addiction in high risk populations (2). A recent study concluded that 12.3% of the elderly Norwegian population used benzodiazepines and other hypnotic drugs inappropriately (3). A European survey showed that use of sedative drugs without prescription

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was frequent among teenagers, 18% Poland, 16% in Lithuania, 15% in France, and 10% in Italy (4). A Norwegian study suggested that the use of hypnotics increases if there is no face-to-face contact between GP and patient (5). Best is to avoid prescription without a face-to-face consultation, but many constraints in everyday practice may lead to deviant situations. As Z-drug treatment duration is limited to four weeks in most countries, the trend to prescribe without a face to face consultation might be higher than for other hypnotic drugs.

The aim of this study was to evaluate the rate of long-term prescription of Z-drug hypnotics issued without face-to-face contact between GP and patient, and the factors associated with such practices.

METHODS

Design

The study was designed as a retrospective cohort study, using the administrative database of the French National Insurance System. Patients included in the cohort were long-term consumers of 'Z-drugs' (zopiclone, zolpidem, zaleplon), living in Loire-Atlantique or Vendée (French west coast region, 1 700 000 inhabitants, 1200 GPs). Eligible patients were characterized by ten or more prescriptions over ten or more different months in 2008, issued by the same GP. Patients younger than 18 were excluded.

Data

Data collection characterized patients by gender, age, low socioeconomic status (implying a specific reimbursement

facility), and two types of information associated with their medical history: suffering from a chronic disease (implying they benefited from a 'disorder of long duration' reimbursement status), and a follow up by a psychiatrist within the last 12 months. GPs were characterized by gender, age, location of the practice, and number of patients in their list. Hypnotic drugs were characterized by market label, number of prescriptions between 1 January and 31 December 2008, prescription date, and issue date. All hypnotic prescription dates and drug issue dates were extracted for the period from 1 January to 31 December 2008. All data relative to GP consultations during this period were extracted.

Statistical analysis

Long-term hypnotic prescriptions by GPs were analysed regardless of whether the prescription was linked to a consultation. The Chi-square test and the Cochran-Armitage trend test were used for categorical data to test differences between prescriptions with and without consultation. An alpha level of 0.05 was chosen to assess statistical significance. All analyses were performed with R 2.12.0 statistical software (5).

RESULTS

In the cohort, 5669 long-term consumers of Z-drugs were included. Of these users, 4623 had more than ten prescriptions, and 1 046 received exactly ten prescriptions. In all, only 17% (95% CI: 16–18%) of patients attended a consultation at each date noted on the prescription.

Table 1. Z-drug hypnotic prescriptions: patient characteristics.

	Overall prescriptions <i>n</i> = 67 256 <i>n</i>	Prescriptions without consultation <i>n</i> ; % (95% CI)	<i>P</i> ^a
Gender			
Male	20 981	7 254; 34.6 (33.9–35.2)	0.43
Female	46 275	15 853; 34.2 (33.8–34.7)	
Age			
18–44	4247	1 461; 34.4 (33.0–35.9)	< 0.0001 ^b
45–54	7849	2 880; 36.7 (35.6–37.8)	
55–64	11 885	4 522; 38.0 (37.2–38.9)	
65–74	13 789	4 724; 34.3 (33.5–35.1)	
> 75	29 486	9 517; 32.3 (31.7–32.8)	
Low socioeconomic status			
Yes	2433	663; 27.2 (25.5–29.1)	< 0.0001
No	64 823	22 444; 34.6 (34.3–35.0)	
Disorders of long duration			
Yes	39 510	12 302; 31.1 (30.7–31.6)	< 0.0001
No	27 746	10 805; 38.9 (38.4–39.5)	
Contact with a psychiatrist			
Yes	2378	665; 28.0 (26.2–29.8)	< 0.0001
No	64 878	22 442; 34.6 (34.2–35.0)	

^aChi-square test for difference between prescriptions with/without consultation.

^bCochran Armitage trend test was used for age statistical analysis.

Patients from the cohort received a total of 67 256 prescriptions in 2008, of which 23 107 (34.4%; 95% CI: 34–34.7%) were not associated with a consultation. Prescriptions were more likely to be issued after a consultation if the patient has a low socioeconomic status, if he benefited from a 'disorder of long duration' reimbursement status, or if he had consulted a psychiatrist within the last 12 months. Patients under 45 or over 65 years of age were more likely to obtain prescriptions in conjunction with a consultation (Table 1). The number of prescriptions without consultation was low if the patient was less than 45 years old, but increased if the patient was between 45 and 65 years old, and then decreased for those aged over 65 ($P < 0.001$).

GPs characteristics indicated that female GPs, young GPs and practices located in a rural area increased the probability of having a prescription without consultation. Furthermore, there was an association with list size: the longer the patient list, the more prescriptions were issued without consultation (Table 2).

DISCUSSION

Main findings

In this study, less than one-in-five long-term hypnotic Z-drug consumers had face-to-face contact with a GP for a treatment review every four weeks. This finding is in line with a Norwegian study showing that between 50% and 80% of benzodiazepine prescriptions were issued without direct GP–patient contact (5). This deviant practice might be similar in many countries even if healthcare systems differ. This loss of medical control on sedative

drug prescription is worrying as it may lead to dependence and addiction in high risk populations (2).

However, GPs tended to be more cautious when prescribing for high risk patients (aged over 65, patients with co-morbidities, patients attending a psychiatrist). In previous studies, authors have described that the patients requiring closer healthcare follow-up attended medical consultations more often (6,7). Moreover, the results of this study suggest that GPs might be more concerned about initiating medical treatments in young people, as deviant practices were less frequent for patients under the age of 45.

Practices located in rural areas, or with a large patient list were associated with less face-to-face renewals of hypnotic prescription. These factors could reflect the workload, leading to a lower practice performance (8).

Strengths and limitations

Contrary to Germany, issuing hypnotics without a prescription is not authorised in France (9). Z-drugs are not available over-the-counter, and issuing a hypnotic is associated with a drug reimbursement. As the French national health insurance is based on a compulsory public system, the consulted database contained information about almost the whole population of the geographic area.

The main limitation was because data were extracted from an administrative database. Socioeconomic status and suffering from a chronic disease were characterized by proxy-measures available in this database. Data collection to identify GP consultations was based on reimbursement. Some GPs may review treatment without requesting payment, and others may request payment

Table 2. Z-drug hypnotic prescriptions: physician characteristics.

	Number of physicians <i>n</i> = 1200 <i>n</i>	Overall prescriptions <i>n</i> = 67 256 <i>n</i>	Prescriptions without consultation <i>n</i> ; % (95% CI)	<i>P</i> ^a
Gender				
Male	944	56 463	18 811; 33.3 (32.9–33.7)	< 0.0001
Female	256	10 793	4296; 39.8 (38.9–40.7)	
Age				
< 34	25	847	302; 35.7 (32.4–39.0)	< 0.0001
35–44	228	10 904	4144; 38.0 (37.1–38.9)	
45–54	517	29 341	10 154; 34.6 (34.1–35.2)	
> 55	430	26 164	8507; 32.5 (32.0–33.1)	
Practice location				
Urban	341	37 012	12 469; 33.7 (33.2–34.2)	< 0.0001
Peri-urban	224	11 944	4005; 33.5 (32.7–34.4)	
Rural	635	18 300	6633; 36.2 (35.6–37.0)	
Patient list size				
< 500	34	1006	307; 30.5 (27.7–33.5)	< 0.0001
501–1000	295	13 324	3699; 27.8 (27.0–28.5)	
1001– 1500	507	28 570	9706; 34.0 (33.4–34.5)	
1501–2000	277	18 079	6871; 38.0 (37.3–38.7)	
> 2000	87	6277	2 524; 40.2 (39.0–41.4)	

^aChi-square test for difference between prescriptions with/without consultation.

without conducting any review. However, these situations are assumed to be in a minority: on the one hand, the French healthcare system is a pay-per-act system, so that any time spent on a consultation should be paid; on the other hand, most physicians would not request payment if no consultation took place.

Implications for clinical practice and policy

On the one hand, GPs should reinforce patient education at the moment they prescribe a Z-drug for the first time. On the other hand, giving individual feedback to each physician based on specific data from his patient list might be a perspective to modify prescription practices (11).

CONCLUSION

Prescription of hypnotic Z-drugs without face-to-face consultation appeared to be common in this study, especially in middle-aged patients without co-morbidity who were not seen by a psychiatrist. GPs from rural areas or with longer patient lists more often prescribed Z-drugs without a consultation.

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