## Research

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# **GPs' management strategies for patients** with insomnia:

a survey and qualitative interview study

#### **Abstract**

#### **Background**

Patients frequently experience sleep problems and present to primary care. However, information is limited regarding the management strategies that GPs employ.

To gain an understanding of current GP management strategies for insomnia.

#### Design and setting

A postal questionnaire survey and qualitative interviews with GPs in the south of England.

A postal survey of 296 GPs and qualitative interviews were carried out with 23 of the GPs.

#### Results

The survey response rate was 56% (166/296). GPs look for signs of depression and anxiety in patients and if present treat these first. 'Sleep hygiene' advice is provided by 88% (147/166) of GPs but often seems insufficient and they feel under pressure to prescribe. Benzodiazepines and Z drugs are prescribed, often reluctantly, for short periods, because of known problems with dependence and tolerance. Many GPs prescribe low-dose amitriptyline for insomnia although it is not licensed for this indication. For insomnia 95% (157/166) of survey responders 'ever prescribe' amitriptyline, with 31% (52/166) stating they do so commonly. Most GPs perceived amitriptyline to be effective and a longer-term option for those with ongoing sleep problems. GPs report a lack of knowledge and confidence in the provision and use of psychological therapies, such as cognitive behavioural therapy (CBT), in the management of insomnia.

#### Conclusion

GPs often find 'sleep hygiene' advice is insufficient for managing insomnia and report frequently prescribing medication, including amitriptyline (off licence), which is often based on perceived patient pressure for a prescription. Patients are rarely offered psychological therapies such as CBT for insomnia, despite evidence suggesting its potential effectiveness.

#### Keywords

amitriptyline; general practice; insomnia; management strategies.

#### INTRODUCTION

Insomnia is common in community and clinical settings.1,2 In published studies 10-40% of the general population report sleep problems in the previous year, with 10-15% describing long-term difficulties.<sup>3-8</sup> Insomnia can cause daytime fatigue, distress, impairment of daytime functioning, and reduced quality of life, and is associated with increased risk of mental health problems, drug and alcohol abuse, and increased healthcare utilisation.1 Insomnia is often multifactorial and management depends on the duration and nature of the sleep disturbance.<sup>1,9</sup> It may involve treating existing comorbidities, such as depression, anxiety, and pain; advice on 'sleep hygiene' measures; medications and/ or referral for psychological treatments such as cognitive behavioural therapy (CBT); or sleep management programmes.4,5 However, sleep problems appear to be relatively poorly understood by healthcare practitioners.1 There is limited evidence available about how GPs manage sleep problems in patients: 10-12 how they assess sleep problems, whether they use sleep hygiene measures, which medications they prescribe in which circumstances, and whether they use CBT or other strategies.

Medications commonly prescribed for insomnia are benzodiazepines, nonbenzodiazepines (Z drugs), antihistamines, and antidepressants.4 Benzodiazepines and Z drugs are licensed for sleep promotion and have an extensive literature base about their beneficial effects and potential problems such as tolerance and dependence. 13 There is a perception that hypnotics have been overprescribed in the past and moves have been made to reduce GP prescribing in recent years. 12,13 Antidepressants have long been used in the management of insomnia, although they are not licensed for sleep promotion and there is limited research evidence for their effectiveness. 4,14 Amitriptyline may have a role in the management of insomnia, 1,14 but the balance of potential benefits and problems is not clear. There is very limited evidence as to how frequently GPs prescribe amitriptyline for sleep promotion, what dose they use and in which patients it is considered a potential management strategy.4

CBT has been shown to be an effective treatment for insomnia; as effective as medications in the short-term with probable longer-term beneficial effects, 1,15 but there is very limited availability in the NHS.

A greater understanding of how insomnia is currently perceived and managed by GPs will help to inform strategies to improve its management in primary care.

The aim of this study was to gain an

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#### How this fits in

Sleep problems are common, affecting about one-third of adults in the UK. GPs frequently assess and manage insomnia but there is limited evidence on the strategies they employ. This study explores and highlights key areas identified by GPs, such as the perceived pressure to prescribe, the use of amitriptyline (off licence), and the lack of availability and training in psychological therapies.

understanding of current GP management strategies for insomnia.

#### **METHOD**

A mixed methods study was performed, involving a questionnaire survey and qualitative interviews with GPs.

#### **Questionnaire survey**

Participants. GPs were identified from health authority lists on the south coast of England, representing a wide variety of GP practices and sociodemographic characteristics in urban and rural settings. The questionnaire was designed with information obtained from a search of the literature and expert advice. with questions on how GPs currently assess and manage insomnia including: nonpharmacological strategies, medications for insomnia, and their perceived benefits and problems with use.<sup>2,4,6,7,12,14</sup> The survey was mostly a 'tick box' format with some open questions and space for written answers. It was designed to be short and easy to complete to maximise the response rate. It was piloted with 10 GPs who provided feedback to ensure face and content validity. and ease of completion, and then adapted before being sent to the survey population (available from authors on request).

*Procedure.* The GP survey was posted to 308 GPs in 2009. A pre-paid reply envelope was provided and second or third questionnaires were sent if needed to improve response rates. Descriptive statistics were used to summarise the questionnaire information.

Sample size. This was calculated on a precision of +/- 6% on estimates of amitriptyline use based on 200 replies, if 80% of GPs 'ever prescribe' amitriptyline for insomnia.

#### Semi-structured qualitative interviews

Participants. A survey question asked whether GPs were willing to participate in qualitative interviews. A purposive sample of responding GPs was constructed to obtain participants of both sexes, with a range of ages and experience in general practice.

Procedure. Face-to-face qualitative interviews were undertaken to gather rich contextual data. A semi-structured topic guide ensured that potentially important topics derived from the questionnaire responses were explored further, 16 which allowed participants to raise and explore issues important to them.

Written consent was obtained and interviews were audiotaped and transcribed verbatim. Interviews took place at a venue convenient for the GP and lasted between 30 minutes and 1 hour.

*Analysis.* Following the constant comparative method, thematic analysis of transcribed interviews was an iterative process.16 Emerging themes and issues of the early interviews were incorporated into the interview guide for subsequent interviews. Patterns and prominent themes that consistently occurred in the data were identified and labelled with codes and a descriptive definition. Codes and definitions were refined during a continuing process, which involved themes being linked, grouped, moved, re-labelled, added and removed to produce a set of themes and subthemes and a coding manual, which adequately fitted and thoroughly explained the data. The coding was iteratively developed between authors and adjustments were made where appropriate following discussion. Exemplary quotations drawn from interview transcripts have been used to illustrate key themes.

#### **RESULTS**

In the survey, 189 responses were received from 308 GPs who were invited to participate; 23 blank questionnaires were returned, 12 with a covering note (doctor off sick, retired, had moved, and so on), yielding a usable response rate of 166/296 = 56%.

Thirty-eight GPs indicated they were willing to participate in qualitative interviews. A sample of full-time and part-time, male and female GPs, from a variety of different practices was constructed, and 23 interviews were conducted.

Of the total survey responders, 74/136 54% were female; 61/136 (45%) were aged 25 to 44 years, 74/136 (54%) were 45 to 64 years, and 1/166 (1%) were 65 years or over.

Of the 23 GPs participating in the qualitative interviews: 9 (39%) interviewees were female; 10 (43%) were aged 25 to 44 years, and 13 (57%) were aged 45 to 65 years: 21/23

(91%) were white British. The length of time that GPs had been in practice ranged from 5 to 33 years.

Eight key areas surrounding GPs' management strategies for insomnia were identified including: the assessment of symptoms, management of comorbidities, sleep hygiene, psychological therapies, medication, and GP confidence (Table 1).

#### Assessment of symptoms

Insomnia is a commonly presenting condition. Seventy-nine per cent (131/166) of the survey participants said they see a patient with a sleep problem 'at least once a week'. The interviews confirmed that GPs frequently assess and manage patients with insomnia:

[Insomnia] very common, I'd say probably every day I would see somebody who mentions it, whether it's the first thing whether it's the thing they want me to sort out or whether it's just mentioned in part of questioning about other things; it seems to be very common actually.' (PA)

Assess possible anxiety or depression as priority. GPs commonly reported assessing for depression or anxiety as a possible cause of insomnia when patients first present:

'I'd try and assess whether they're anxious or depressed, what their psychiatric state is, what their psychiatric history was ... If someone's depressed, I'll probably try and treat the depression, either with medication or counselling, or just seeing them regularly or discussing it and the sleep might get better by itself." (P141)

Assess other underlying causes. GPs reported exploring a range of possible causes in addition to depression and anxiety. These included sleep apnoea, chronic pain, stimulant usage, and medication side effects.

#### Management of comorbidities

Underlying condition commonly treated as a priority. Appropriate treatment for the underlying condition was reported as being a priority:

"...the other thing is to try and see if there's something underlying — some underlying reason why they can't sleep. So, is it just a sleep disorder, or have they got something else, which is giving them problems with their sleep? (P00)

Insomnia disorder occasionally treated as a priority. GPs reported that rarely insomnia seemed to be the primary problem and unrelated to other conditions:

'95%, I would say, probably have an underlying disorder, (I: Right), [affecting their sleep] only a very small proportion that come as purely as insomnia.' (PD)

#### Management strategies

After addressing underlying factors, the main management strategies stated on the survey were GP verbal advice 166/166 (100%), and sleep hygiene measures 147/166 (89%). Medications were frequently prescribed: in the survey, GPs indicated that they 'ever prescribed' amitriptyline 157/166 (95%), benzodiazepines 144/166 (87%), Z drugs 139/166 (84%), non-sedative antidepressants 102/166 (61%), and sedative antihistamines 67/166 (40%) to manage insomnia. Referral to a counsellor was an 'ever used' strategy by 91/166 (55%) of GPs and referral to a sleep clinic by 52/166 (31%). Brief CBT or psychotherapy was less commonly used,

Aspect	Theme	Subtheme	
Assessment of insomnia	1. Assessment of symptoms	Insomnia is a commonly presentir condition	
		Assess possible anxiety or depression as priority	
		Assess other underlying causes	
Management of insomnia	2. Management of comorbidities	Underlying condition commonly treated as priority Insomnia disorder occasionally treated as priority	
Non-pharmacological management	3. Sleep hygiene	Offered as first treatment	
		Often perceived as ineffective by GF	
		Limited because of a belief that patients consult for medication	
	4. Psychological therapies	Lack of knowledge and availability	
Use of medication	5. Antihistamines and over-	Commonly used	
	the-counter remedies	Limited because of patient tolerance and prior use	
	<ol><li>Hypnotics (benzodiazapines and Z drugs)</li></ol>	Effective versus concerns of addiction and reliance	
		Only prescribed short-term	
	7. Amitriptyline	Commonly prescribed	
		Perceived as generally safe and suitable for long-term use	
		Limited as some patients are intolerant	
Insomnia management	8. GP confidence in	Confident in providing non- psychological treatments	
management	managing insomnia	psychological dicalinents	

with only 37/166 (22%) of GPs having 'ever used' it for patients with sleep problems. Other strategies included over-the-counter medications, books, websites, and patient leaflets. GPs use multiple strategies to try and help patients with sleep problems.

#### Sleep hygiene

Offered as first treatment. Sleep hygiene advice was reported as being the initial treatment offered to almost all patients. The survey responses indicated that 97% of GPs (161/166) 'ever used' this strategy and that the most frequent advice was reducing or avoiding caffeine and alcohol, having a regular bedtime and sleep routine, avoiding daytime naps and taking regular exercise, and relaxation. However, the sleep hygiene advice offered varied:

'The first one, would be sleep hygiene ... I would treat any underlying problem and I would encourage them to have a healthy lifestyle and I would encourage them to be quite regular in their habits ... As I say, I would make sure they didn't sleep during the day. (P123)

Often perceived as ineffective by GP. Although regularly given, sleep hygiene advice was often perceived as ineffective by GPs. This seemed to be based on the perception that most patients had already attempted sleep hygiene and providing further advice would have minimal effect:

'So ... you know, I think it's a good place to start but often it really doesn't have much in the way of legs, in terms of managing the situation, (P156)

'I mean if the person comes and they were already experienced with sleep hygiene and there clearly is no issues to be ... it would be pointless to ... just to give them the same information that they're already aware of."

Limited because of a belief that patients consult for medication. GPs perceived that patients often expected a prescription and described feeling an obligation to prescribe. They reported being more likely to give sleep hygiene advice to patients they believed did not want medication, and less likely to recommend sleep hygiene only to patients who they perceived strongly wanted a prescription:

What you need to establish first is what they want from you when they come into the consultation. If they want simple advice,

then thats really all they should leave with; if they're thinking that they want something to help them because they they're doing everything else, then they probably need to leave with a prescription ... 'cause if they want a prescription and go out without one, they often feel short changed and angry, and that kind of unpicks the advice you've given. You know, you've lost them, in a sense." (Interview GP110)

#### Psychological therapies

Lack of knowledge and availability. In general, GPs reported rare use of psychological therapies, such as CBT, for insomnia. They discussed referral for counselling for underlying anxiety or depression but did not perceive that these services were available specifically for management of insomnia:

'I know CBT is something that can help with insomnia ... and we have got ... a mental health practitioner who's offering CBT, but I don't think they'd be particularly impressed being referred insomnia, they sort of want to deal with people who are just very anxious or agoraphobic or whatever and not able to work. I don't know how high up on their list of priorities insomnia is, I don't remember seeing it on their list of things they offer their service to.'(PA)

Sleep restriction is a common component of CBT-based treatment packages, and could potentially be offered by non-CBT trained practitioners, but was not considered as a management option by most GPs; only 16% (26/166) of survey responders stated they 'ever used' sleep restriction, and it was rarely mentioned in the qualitative interviews. GP education would be needed to introduce this as a potential management option.

#### Antihistamines and over-the-counter remedies

Commonly used. GPs reported that patients often self-medicated prior to consultation. The most commonly mentioned overthe-counter sleep aid was Nytol™ (diphenhydramine hydrochloride), a sedative antihistamine. Most GPs were happy to encourage patients to try antihistamines because of a perceived low risk of side effects:

'I would say that the antihistamines available, common ones that are used are Piriton and Nytol ... and I would say that these are the safest ones and probably the ones to start with, but, like all medications, you can't guarantee it will help but it's a start and it might be worth a try on that one. (PB)

Limited because of patient tolerance and prior use. GPs reported patients often presented with an unresolved sleep problem having previously tried antihistamines and over-the-counter medicines, suggesting they had either not worked or had stopped working because of tolerance:

'Yes, well it does work, 'cause its an antihistamine that has sedative effects, but for most people, it's just not enough." (Interview GP141)

For some patients it works but then they seem to build up tolerance to those, so they come, saying they've been using Nytol for weeks and weeks, and it was working initially, then not working later.' (Interview GP176)

#### Hypnotics (benzodiazapine and Z drugs)

Effective versus concerns of addiction and reliance. GP views regarding benzodiazepine and Z drugs varied. However, there was a strong consensus about tolerance and addiction risks in long-term use. Many GPs considered hypnotics to be effective in treating insomnia; however, they were often hesitant to prescribe because of concerns about the potential risks:

'I try to avoid benzodiazepines because they re addictive ... might, very occasionally, use a benzodiazepine or the Z drugs ... but reluctantly.' (Interview GP110)

'(Z-drugs) I don't like people to become dependent on thing, so I'd hate to be the cause of an addiction, but, at the same time, people value sleep so well, that it has its use, it has its place. (P186)

But the danger in my mind, always at the back of my mind, is get this cycle of long-term prescribing, on which I'm not particularly keen, is not to go there.' (Interview GP307)

Only prescribed short term. Most GPs were concerned about patients becoming reliant on hypnotics and reported that they would only prescribe them for short-term use, providing a prescription for 1 to 2 weeks, and requiring the patient to reattend to discuss ongoing options:

'I don't often prescribe these drugs in the very long term, just because - I feel slightly uncomfortable about it. So I try and give people a break if they're on - they've gone on to ... reasonably regular use of benzodiazepines, I would want to review them. (P178)

#### Amitriptyline

Commonly prescribed. Amitriptyline was reported in both the survey and qualitative interviews as being commonly prescribed by GPs, and was generally considered as effective in insomnia. All of the GPs interviewed said they prescribe low-dose amitriptyline (typically 10-20 mg) for insomnia under certain circumstances. Acknowledging that amitriptyline is not specifically licensed for insomnia, the GPs considered it appropriate to prescribe, as they perceived it common practice:

'I suppose when I was first qualified ... in hospital you know that amitriptyline makes people sleepy, so it's used and, again, it's something you pick up. There's a lot of things we use that are unlicensed ... 'cause there's a rule in medicine; if something's used generally by people, it's accepted. So I think it's been used for such a long time that people accept that ... it's a reasonable thing to do, to prescribe it.' (Interview GP141)

'So you get muscle relaxation, sleep and there is an anti-anxiety part as well ... amitriptyline is just a no brainer really, a triple whammy. '(Interview GP307)

Perceived as generally safe and suitable for long-term use. GPs perceived amitriptyline to be 'safe' with a low risk in selected patients who were able to tolerate it. As a result of this perception, amitriptyline was often reported as being suitable for long-term use, unlike hypnotics. Reasons for not prescribing it included: cardiac arrhythmias/ problems; drug interactions; elderly with risk of falls; and patients at high risk of overdose. Reasons to choose amitriptyline were: sleep problems related to pain; and insomnia in former alcoholics and other substance abusers because of a lack of 'street value' and a low risk of addiction:

'For certain patients, it's remarkably effective for that particular type of problem [insomnia], provided they can stick the side effects." (Interview GP176)

'I guess the advantage of amitriptyline is that you could use it regularly, because it's not, unlike the others drugs, it's not a habitforming drug, so it does have the potential to be long-term.'(PG)

Limited as some patients are intolerant. GPs felt the main limitation of prescribing amitriptyline was the possibility of 'intolerance'. They reported that a sub-group of patients experience moderate-to-severe side effects, such as daytime sedation, dry mouth, or urinary problems:

'I would say 5% ... can't take that drug [amitriptyline], they get a really bad hangover the following morning and 95%, in my personal experience, it's not an issue, it seems fine. (Interview GP176)

Well, even at a 10 mg dose, people's response is very variable, but some people are extremely sensitive ... but, on the other hand, most people tolerate 10 mg perfectly well and, obviously, if the side effects are explained, they will consider any side effects to be worthwhile if they're getting the benefit.' (GP173)

#### Comparing benzodiazepines, Z drugs and amitriptyline

The GP survey revealed that most GPs prescribe all three classes of drugs for insomnia (Table 2). A greater percentage of GPs said they rarely prescribe benzodiazepines and Z drugs than amitriptyline. Tolerance, withdrawal and dependence were seen as significant issues with benzodiazepines and Z drugs by a significant majority of GPs, but this was not the case for amitriptyline. Daytime sleepiness and sedation were seen as more of a significant problem with amitriptyline than benzodiazepines or Z drugs.

#### GP confidence in managing insomnia

Confident in providing non-psychological treatments. Most GPs reported feeling confident in providing patients with nonpsychological techniques and treatment options for insomnia:

'I haven't felt out of my depth with it [management of insomnia], I've felt that I can manage it. '(Interview GP123)

Lack of confidence in improvement for all patients. Many GPs reported that there were patients whose insomnia was not improved, despite attempting different treatment techniques:

'I think the issue is you do find that, actually, vou often don't make verv much difference to them. So I don't think I necessarily feel very positive, very confident actually about making a difference in making sure people do get a good night's sleep. '(P00)

Table 2. Comparisons of GPs' survey answers regarding their prescribing of benzodiazepines, Z drugs and amitriptyline

GP Survey question	Response options	Benzodiazepine	Z drug	Amitriptyline	Statistics
GPs ever prescribing	-	87% (144/166)	84% (139/166)	95% (157/166)	$(\chi^2 = 10.11;$ P=0.006)
Proportion of	<10%	57% (82/145)	45% (74/147)	27% (41/154)	$(\chi^2 = 40.59;$
patients with	10-29%	30% (44/145)	30% (44/147)	36% (55/154)	P<0.0001)
sleep problems	30-49%	9% (13/145)	12% (17/147)	24% (37/154)	
in which GPs state	50-69%	4% (9/145)	8% (11/147)	14% (15/154)	
they prescribe	>70%	0% (0/145)	1% (1/147)	4% (6/154)	
Tolerance as a	Strongly agree	43% (70/162)	22% (34/153)	0% (0/159)	$\chi^2 = 232.74$
side effect	Agree	42% (69/162)	39% (60/153)	12% (19/159)	P<0.0001)
	Neutral	11% (17/162)	30% (44/153)	30% (47/159)	
	Disagree	3% (5/162)	9% (14/153)	52% (83/159)	
	Strongly disagree	1% (1/162)	1% (1/153)	6% (10/159)	
Withdrawal as a	Strongly agree	31% (49/160)	16% (24/152)	1% (2/158)	$\chi^2 = 143.87$
side effect	Agree	52% (83/160)	40% (60/152)	22% (35/158)	P<0.0001)
	Neutral	11% (18/160)	35% (53/152)	37% (38/158)	
	Disagree	5% (8/160)	9% (14/152)	38% (60/158)	
	Strongly disagree	1% (2/160)	1% (1/152)	3% (5/158)	
Dependence as a	Strongly agree	49% (81/162)	25% (39/154)	0% (0/159)	$\chi^2 = 269.45$
side effect	Agree	45% (74/160)	53% (81/154)	20% (30/159)	P<0.0001)
	Neutral	2% (3/160)	20% (30/154)	38% (60/159)	
	Disagree	1% (2/160)	2% (3/154)	40% (63/159)	
	Strongly disagree	1% (2/160)	1% (1/154)	4% (6/159)	
Daytime sleepiness/	Strongly agree	12% (19/161)	7% (11/154)	0% (0/158)	$(\chi^2 = 81.28;$
sedation as a side	Agree	48% (77/161)	34% (53/154)	20% (31/158)	<i>P</i> <0.0001)
effect	Neutral	27% (43/161)	37% (57/154)	70% (111/158)	
	Disagree	12% (19/161)	20% (31/154)	10% (15/158)	
	Strongly disagree	2% (3/161)	1% (2/154)	1% (1/158)	

'I'm successful with ... to actually make someone sleep really good, I'm probably only successful 75% of the time. There are still lots of people who, despite you giving them temazepam or zolpidem, or whatever, continue to have sleep problems. (P141)

#### **DISCUSSION**

#### **Summary**

GPs reported commonly assessing and managing patients with insomnia. They initially assessed for anxiety and depression as underlying causes. Sleep hygiene advice was usually offered as a firstline treatment, although it is widely viewed as insufficient to address the problem. GPs perceived many patients to be seeking medication and described feeling pressure to prescribe. Benzodiazepines and Z drugs were perceived as effective but were reported as being prescribed short-term because of concerns about addiction and tolerance. Amitriptyline was reported as frequently prescribed and viewed as an effective treatment in patients who could tolerate it. The role of antihistamines and over-the-counter medications was seen as limited. GPs reported a lack of availability of psychological techniques such as CBT for insomnia.

#### Funding

This study was funded by Primary Care and Population Sciences, University of Southampton.

#### Ethical approval

Full ethical and research governance approval was gained for the study (Ethics 08/ H0604/121). All data were kept confidential. Quotes from the qualitative interviews have been anonymised for publication. The research project complied with the data protection policy of the University of Southampton School of Medicine.

#### **Provenance**

Freely submitted; externally peer reviewed.

#### **Competing interests**

The authors have declared no competing interests.

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#### Strengths and limitations

The mixed-methods design of this study is a strength, with the survey highlighting key areas for further in-depth exploration in qualitative interviews. The wide range of GPs in the GP survey aids generalisability, and confirmation and exploration of the findings in qualitative interviews increases the robustness of the data. However, there is scope for participant bias; those responding to the survey may have been more knowledgeable or confident regarding the management of insomnia than other GPs. Also, the results rely on self-reported behaviour so could be subject to reporting bias. However, the results were confidential, and guidelines on managing insomnia are not widely used, so external pressures are unlikely to have significantly affected the responses.

#### Comparison with existing literature

One other study has explored GP experiences of consultations for insomnia. 10 It found that GPs looked for underlying causes and felt most patients had already tried self-help measures, 17 making them of limited benefit, and that GPs perceived many patients wanted a prescription and felt pressure to prescribe, but focused on hypnotics and did not explore other medications. Both studies highlight that the potential for addiction with hypnotic medications is at the forefront of GPs'

minds, consistent with other research. 11,18 Siriwardena et al in a postal survey in 2005, 11,12 found that GPs had negative attitudes to hypnotics and a positive attitude to reducing prescribing, but acknowledged offering a hypnotic prescription as their preferred management strategy after initial advice. In this study, GPs reported attempting to limit hypnotics to short-term prescribing because of known risks, as recommended in current guidelines.13

The literature suggests that antidepressants such as amitriptyline have long been prescribed for patients with insomnia, 1,4,19,20 but much of these data come from secondary care populations in the US, 19,20 and may not reflect the situation in UK general practice. The findings from this study support the view that UK GPs routinely prescribe low-dose amitriptyline for insomnia despite it not being licenced for this indication and there is limited evidence of its effectiveness. 14 As far as the study team is aware, this is the first study to explore GPs' attitudes to the role of amitriptyline in insomnia in any depth. It suggests that GPs perceive it to be a safer longer-term option than hypnotics and prescribe it fairly frequently for patients presenting with insomnia, although they acknowledge there are potential risks, such as intolerance and overdose.21

There is good evidence for the effectiveness of CBT for insomnia.1,15,22,23 However, GPs reported limited confidence in using psychological therapies and rarely referred patients, as reported by Dyas et al. 10 This seems to be because of a combination of low availability of psychological services for insomnia, and a lack of GP education and training.

### Implications for research and practice

The results highlight the need to increase the availability of longer-term management strategies in insomnia. GPs reported perceived patient pressure to prescribe and frequent use of medication, particularly in the form of amitriptyline (off licence), which has a very limited evidence base. 1,14 Further research is needed to assess the effectiveness of amitriptyline in the management of insomnia.

GPs indicated a general lack of knowledge and confidence regarding psychological therapies for managing insomnia. This suggests that education and training in this area could have a significant impact on management. Current poor provision of psychological therapies for insomnia in NHS would need to be addressed to make this a realistic treatment option.

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