

Proton pump inhibitors: perspectives of patients and their GPs

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SUMMARY

Background: There is growing concern with the rapid increase in prescribing proton pump inhibitor drugs (PPIs) for a variety of gastrointestinal disorders, and the escalating costs associated with this trend. Explanations have included that general practitioners (GPs) prescribe PPIs inappropriately and that patients demand PPIs and use them as a way of avoiding having to make lifestyle changes.

Aim: To compare the perspectives of GPs and their patients on the need for PPIs, to examine the pressure to prescribe, and to examine the effect of PPIs on lifestyle.

Design of study: Qualitative comparative study based on semi-structured interviews.

Setting: Twenty-six GPs in seven practices in the West Midlands and 82 of their patients on repeat prescriptions for PPIs.

Method: Interviews were conducted covering a wide range of topics, including: experience, cause, course, and outcome of stomach problems; effectiveness of PPIs; and role of lifestyle in controlling symptoms. The transcripts were studied repeatedly to look for the occurrence and distribution of material relating to these issues, as well as other responder-driven issues. Codebooks were devised to enable a simple categorisation and systematic comparison of cases.

Results: GPs and patients agreed about the severity and unpleasantness of stomach symptoms for which PPIs were prescribed. While GPs and patients regarded PPIs as a very effective treatment, GPs rated their efficacy more highly than patients. Half of the GP interviews reproduced the stereotype of the demanding patient and of patients using PPIs to support unhealthy lifestyles. There was little evidence from patient interviews to support either stereotype. Doctors underestimated patient concerns about side-effects, safety, and long-term use of PPIs, and the willingness of patients to achieve the minimum effective dose by experimenting with their treatment. GPs felt that the pressure to prescribe PPIs was outweighed by the pressure not to prescribe, and most GPs had responded to the call to cut the prescribing of PPIs. Different strategies were employed to cut prescribing, including the wholesale switching of patients on a treatment dose of one brand of PPI to a maintenance dose of a cheaper brand of PPI, known as 'double switching'.

Conclusion: The stereotypes of 'profligate prescriber', 'demanding patient', and 'adverse lifestyle', as explanations for the increase in the prescribing of PPIs, were not upheld. The stereotype of patients demanding PPIs may arise from GPs' internal pressure to prescribe being externalised onto patients. The extent to which health behaviour contributes to gastric disorders needs to be established empirically. Labelling PPI patients as having a poor lifestyle may be used as a means of reducing legitimate need for PPIs. Current policy relating to switching of dose and brand of PPI should be reviewed.

Keywords: proton pump inhibitors; GP attitude; patient attitude; prescribing strategy; side-effects.

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Introduction

THE research was stimulated by a growing concern with the rapid increase in prescribing proton pump inhibitor drugs (PPIs) for a variety of gastrointestinal (GI) disorders and the escalating costs associated with this trend.¹ In England, annual spending on PPIs has increased from £50 million in 1992 to £279 million in 1997.² There is no evidence that a change in morbidity of stomach disorders or a corresponding decline in the prescribing of H₂ antagonists has accompanied this rapid increase in PPI prescribing.³ H₂ antagonists were the dominant treatment prior to PPIs. Repeat prescriptions of PPIs are estimated to account for 75% of the volume, and 80% of the costs of prescribing.¹

Three explanations have been put forward to account for these findings. The first is that PPIs are being prescribed inappropriately, perhaps even profligately, by general practitioners (GPs).^{4,5} Second, patients are said to be increasingly consumerist in their use of the National Health Service, putting pressure on their GPs to prescribe specific drugs, including PPIs.^{6,7} A third explanation accounts for repeat prescribing by suggesting that large numbers of patients are using PPIs as a prop to the continuation of an unhealthy lifestyle. Adverse lifestyle is seen to be both a likely precursor of patients' gastric problems and the reason they need to continue taking PPIs in the long term.⁸⁻¹⁰ Arguably, the demand for PPIs could be significantly reduced through the adoption of more restrictive prescribing protocols on the one hand and the modification of patient lifestyles on the other. The aim of this paper is to give a summary and overview of the findings of a large study that investigates these issues.

Method

GP and patient recruitment

A primary aim of the research was to incorporate the views of both GPs and patients by interviewing groups of four or five patients and their GP. A range of GP practice types was purposefully sampled. Nine local GP practices in the North Staffordshire Health Authority were approached and seven agreed to participate. Five of these practices belonged to the departmental research network of GPs interested in collaborative research; two were fundholding. Locations ranged from rural to inner-city, affluent, and deprived areas. Practice lists varied between 3000 to 14 000. Prescribing analysis and cost (PACT) data showed that the prescribing levels of H₂ antagonists and PPIs varied between the practices. All but one of the 27 GPs in the participating practices agreed to be interviewed. There was no financial incentive.

Our intention was to obtain the views of a range of PPI patients. We did not attempt to recruit a representative sample. Such a goal is beyond the scope and immediate con-

HOW THIS FITS IN

What do we know?

Escalating costs of proton pump inhibitor (PPI) prescribing are a source of concern. Explanations for the increase have included inappropriate prescribing by GPs, inappropriate demand by patients, and their use of PPIs to avoid making lifestyle changes to control symptoms. Little is known about patients' views and experiences.

What does this paper add?

Most of the GPs were trying to reduce their prescribing and patients also desired to take a minimum effective amount of medication. Most patients found PPIs to be an effective means of controlling debilitating symptoms and that they could not manage without them. Doctors therefore found it difficult to get patients to stop taking the drug or to take a reduced dose. There was no evidence that patients used PPIs to avoid making lifestyle changes. Patient perception of need should form part of policy-making on the use of PPIs.



cerns of the type of qualitative investigation on which we were engaged. Having deliberately chosen the GP surgeries to cover a diverse set of socioeconomic, geographical, prescribing, and practice characteristics, we went on to make a random selection of 156 eligible responders (five per GP except for one single-handed practice in which 11 patients were contacted to ensure an adequate positive response) from the lists of patients currently receiving long-term PPIs within each practice. For five of these practices, this was a simple random sample. However, it soon became clear that some very elderly patients were being picked up who had experienced significant co-morbidity, and for whom many of the interview topics were simply not relevant (e.g. questions relating to lifestyle, sources of information about PPIs). A significant emerging finding was the considerable distance that existed between the actual characteristics of patients recruited by random selection and the stereotype of the typical long-term PPI taker: a younger person who is healthy apart from a stomach problem and who wants PPIs to cope with the consequences of an adverse lifestyle. As a result, when recruiting patients from the two remaining practices, we applied an age limit of 79 years. Whenever a patient of 80 years or over was picked, the nearest patient on the list aged under 80 years was substituted. This approach to sampling (theoretical sampling) is recommended in qualitative research where a purpose of the research is to make possible generalisations about theoretical propositions.¹¹ Approval was given for the research by the Local Research Ethics Committee.

Interviews

Patient interviews took place in responders' own homes and lasted an average of two hours. A wide range of topics was covered, including: the patient's illness history, experience and evaluation of different treatments, knowledge and ideas about the illness, and relationships with doctors, lifestyle, and the extent of personal control over symptoms. Interviews were semi-structured, so that while the same

ground was covered in each discussion, responders were encouraged to expand on issues of particular relevance or personal concern and express their ideas and experiences freely and in their own terms. The interviewer's aim was to conduct a guided conversation rather than administer a questionnaire.

GPs had semi-structured interviews at their own surgeries. Interview topics included: current prescribing practice for gastric disorders, patient responses, the contribution of lifestyle factors, current concerns about safety, and cost of PPIs. The interviews lasted approximately one hour. With few exceptions both sets of GP and patient interviews were taped and transcribed for analysis. Two patients did not want the interview to be recorded; three patient interviews were not recorded owing to machine failure, and one audio-taped GP interview was carried out by telephone.

Data analysis

Key themes and issues were identified through a content analysis of the interview transcripts. We started out with a pre-determined interest in a number of topics. With patients, for example, these included ideas about the nature, cause, and prognosis of their stomach disorder, the efficacy of treatments, and the perceived contribution of lifestyle and health behaviours to the onset and course of illness. The transcripts were studied repeatedly to look for the occurrence and distribution of material relating to these issues, as well as the identification and incorporation of responder-driven issues which had not been anticipated prior to fieldwork.

The large number of cases (108) involved in what is essentially a qualitative study has necessitated some means of simplifying and organising the data. Codebooks were devised for both patient and GP interviews to enable a simple categorisation and systematic comparison of cases. All interviews were coded and analysed by two of the authors (KP and JG). At an early stage of coding an inter-coder reliability check was carried out on a sample of 10% of the patient interview schedules to ensure consistent application of the coding categories. This exercise revealed a generally close agreement between coders. The identification of a small number of discrepancies at this stage provided a stimulus for reviewing the relevant data and further refining the coding schedule. A recoding of relevant transcripts, or parts of transcripts, was undertaken at several points during the analysis of the data, in response to the identification of further anomalies or complexities requiring more detailed scrutiny and analysis.

A frequency count of the categories was carried out using Statistical Package for the Social Sciences (SPSS). This sorting exercise facilitated the identification and linking of responders and material relating to specific topics and themes and the retrieval of data and reflective analysis. Some authors reject the use of any quantitative tools in analysing qualitative data. However, others regard the maintenance of overly rigid methodological boundaries as unhelpful and inappropriate, and point to the value of simple quantitative analysis in adding rigour to qualitative work and avoiding the tendency towards 'anecdotalism' in the reporting of qualitative findings.¹² When reporting the findings, numbers have been used on some occasions in addition to

a qualitative assessment such as 'few' or 'most'. The intention is to give an order of magnitude — not to suggest that the findings can be generalised to a wider population. SPSS was used to carry out this basic quantitative summary of some parts of the data, and to check that selected extracts were taken from a wide range of responders rather than a few particularly articulate or persuasive individuals. In the transcripts, patients were allocated a number, and GPs a letter, to designate the quotes.

Results

Characteristics of responders

Details of the number of patients contacted and their response is shown by practice in Table 1. Patients were fairly evenly divided between men (39) and women (43). Ages ranged from 28 to 83 years; however, most were aged 45 years and over. The age profile of responders resembles that of PPI patients on the General Practice Research Database.¹³

Most of our responders were not economically active, being mainly retired or too ill to work (Table 3). A fifth of patients had worked in executive or managerial positions. The majority came from a traditional working class background and had lived and worked in Stoke or the surrounding area throughout their lives, mainly in industries such as mining, pottery or textiles. Eighteen of the GPs were men, and eight were women. Most (17) were aged between 30 to 39 years, with only two aged 50 years or over.

Diagnosis was identified in two ways. Patients were asked directly during the interview for their diagnosis, or the name of their illness, as they understood it. GPs were asked to complete a patient diagnosis form from each patient's medical record. Hiatus hernia was the most common diagnostic term used by patients (41), and featured in 25 of the medical diagnoses. Oesophagitis was the most common diagnostic term given by doctors (27 cases), but was rarely used by patients (3). Patients used a wide range of diagnostic terms. While some of the discrepancies in diagnostic terms between a doctor and his/her patient could be explained by different use of terms, in 24 cases there seemed to be real divergences in the underlying diagnostic category involved. These discrepancies in the diagnostic terms used by patients and doctors have implications for patient under-

standing of their illness, and their ability to enter discussion and participate in making decisions about the treatment and management of their condition.

Appropriateness of prescribing a PPI: severity of symptoms for which PPIs were prescribed.

The majority of doctors considered the symptoms for which they typically prescribed PPIs to be unpleasant and debilitating. This is in line with patients' assessment of their suffering. Only 3 (4%) of patients remembered their symptoms as mild when PPIs were first prescribed. Most spoke of pain or other unpleasant symptoms such as nausea and vomiting, or embarrassing problems such as noxious smells.

'Every night, every evening without fail, I was walking around here. Some nights I don't think I'll have an evening meal. I really got to the stage when the thought of lying down used to be unbearable ... I could wake up in the night, and my throat seemed as if it would be full of this — it isn't very nice — this catarrh as I call it. It's like slime in your handkerchief. I can get through about four tissues; and I can smell it.' (Patient 208.)

'I felt as though my stomach was just like a ... a spin dryer, you know. It didn't know which way it was going. It was terrible. I was that miserable, I was, when I had that horrible burping and it smelt like trump. There's no other way to describe it. It was embarrassing because there was just wind. I couldn't ... I felt as though I couldn't talk to people because I felt as though it was smelly. I was ill; I didn't want to go out, I didn't even want to go to work.' (Patient 102.)

PPIs were not a first line treatment

Thirty-nine patients whose stomach symptoms had started since the availability of PPIs felt they could remember how long it was between first seeing the doctor regarding their stomach problem and being prescribed a PPI. Only three reported receiving a PPI at their first consultation (excluding five cases of acute onset mimicking a heart attack), though one of these was for protection against gastrointestinal damage from another medicine. As most doctors felt that over the past two years they had raised their prescribing threshold for PPIs, it is possible that these three patients would not

Table 1. Patient contacts and sample response rates.

Practice	Patients sampled	Interviewed	Refused	Withdrawn ^b	Not applicable ^c	Unable to contact/follow up ^d
1	15	8	7	0	0	0
2	10	6	3	0	1	0
3	30	17	8	3	2	0
4	25	17	6	1	0	1
5	35 ^a	13	3	0	1	18 ^a
6	30	15	11	1	0	3
7	11	6	0	3	0	2
Total	156	82	38	8	4	23

^aPractice 5 did the sampling. Twenty sampled on the first round and 15 sampled on a second, because the original sample list was lost, and therefore a reminder letter could not be sent. ^bThese patients were withdrawn by the GP, except for one who had been willing to take part, but then had to withdraw through illness. ^cThese patients were in the main no longer taking PPIs or were on elimination therapy. ^dEighteen of these were practice 5 patients explained above. Five patients of practice 5 and 6 in theory were willing to take part. However, we were unable to make contact by phone or letter before the fieldwork period had ended.

have received PPIs straight away if presenting today. However, in the real world of general practice, situational constraints meant that sometimes the theoretical world of the protocol may not be followed.

'I try not to use them, unless I'm forced into a corner, for things such as reflux disease, non-ulcer dyspepsia, but inevitably, somehow or other, it happens'. (Dr B.)

A number of practitioners (11 [42%]) felt at least part of the pressure to prescribe PPIs was internal. Knowing that there was an effective medicine available created an internal pressure.

'Sometimes I feel that if I prescribe a PPI it would actually give them quite good symptomatic relief, but there isn't actually a clinical basis on which to do that — so that's a pressure which I probably create for myself'. (Dr R.)

Negative pressure to prescribe PPIs

Most GPs experienced negative pressure *against* prescribing PPIs to be more pronounced than the positive pressure to prescribe, and felt they had responded positively to the call to cut the prescribing of PPIs.

'I think that the cost [of a PPI] ought to make us think which one to consider, which one and which dose. I'd hope that is something that we have been sort of doing anyway, but I hope/think it's more focused. And certainly, through looking at practice budgets, we are high PPI users, and we do get asked why'. (Dr P)

'No, we're not [fundholding] — no, but we do [feel the cost pressure] — there's partly a type of personal — when you feel you've got to do your bit to stop the NHS going bust and then there's the PPA information and we have our targets to achieve, and we try and keep within our [indicative] budget'. (Dr V.)

Five strategies were identified to help them accomplish a reduction in prescribing (Box 1). With respect to strategy 4(b), while we cannot definitively say that all GPs were aware that 15 mg of lansoprazole gives less acid suppression than 20 mg of omeprazole, there was evidence that GPs in the practices that were double switching their patients did know that there was a difference.

'No, contrary to my partners, I think it's a bit sneaky to

1. Not starting patients on PPIs — by raising the prescribing threshold.
2. Dose reduction — from treatment to maintenance dose.
3. Therapeutic substitution — moving patients off PPIs to another type of treatment.
4. (a) Therapeutic switching — changing to a cheaper brand of PPI.
(b) This change of brand could involve double switching — a simultaneous dose reduction and brand switch.
5. Self-regulation — taking PPIs in an individually tailored regime to minimise symptoms.

Box 1. Strategies for rationing PPIs.

just change the patients' prescriptions from Losec to Zoton just like that. What I have been doing is putting patients on 20 mg Losec, then I might cut them down to 10 mg, then if that doesn't work tell them there is a 15 mg tablet which is Zoton'. (Dr Y.)

(Question:) *'When patients were switched over. When you switched the ones that were on omeprazole two years ago — do they accept that fairly well, or were they reluctant?'*

(Answer:) *'By and large, I personally did it on the basis when we were stepping down treatment anyway. I have a few people who tried switching full dose to full dose. — But we are up front about the fact that this is just as good a drug, and we are going to try you on this'. (Dr K.)*

It was common for doctors to regard different brands of PPI as being equally effective. If they did perceive a difference it was in the maintenance dose of omeprazole (10 mg) and lansoprazole (15 mg). They considered maintenance lansoprazole to be superior to maintenance omeprazole. However, most patients understood that in switching brand they were being given an equally effective medicine.

Patient pressure: Patients' reluctance to ask questions

The patients' interviews produced little evidence of overt patient demand in initiating PPI prescribing. Patients rarely showed consumerist behaviour. Very few patients had heard of PPIs before their doctor prescribed it for them, and nearly two-thirds of patients felt that it was either inappropriate to ask direct questions in a medical consultation, or that they would be reluctant to do so.

'I always accept what they tell me, you know. I perhaps ought to ask more questions, but I don't, you know. I'm not very ... well, I just seem to ... if somebody tells me something, I say, "Oh yes, all right then" — but I just aren't one for asking'. (Patient 104.)

'I don't like to approach it really. For one thing I think they were only doing what was right at the time — so I haven't really liked to broach the subject [with the doctor]'. (Patient 206 thought that the medication she was given to treat angina, which proved to be reflux oesophagitis, had caused her to become asthmatic.)

Half of the GPs reproduced the stereotype of the demanding patient as a general source of pressure to prescribe. However, when thinking about their own patients, the doctors tended to modify their views. In practice, patient pressure to initiate prescribing of PPIs was not a common occurrence, and not felt to be a problem when it did happen.

(Question:) *'Do you ever feel under pressure to prescribe PPIs at the present time?'*

(Answer:) *'Yes'.*

(Question:) *'Can you outline the circumstances that create the pressure?'*

(Answer:) *'Well, some patients actually come in and ask*

for them because they know somebody who has had them and they have worked for that person'.

(Question:) 'About how often would you say that's happened, that patients have directly asked you to prescribe PPIs?'

(Answer:) 'Not very often, maybe half a dozen times since I have been prescribing them, so it's not very often really'. (Dr R.)

However, because of their effectiveness, doctors often encountered difficulties in reducing or stopping PPIs among patients who were already established on them.

Perceived effectiveness of PPIs

Patients regarded PPIs to be the most effective means of gaining symptomatic relief and many anticipated the return of symptoms if they stopped taking them.

'The first time I saw him [the consultant] after I went on the Losec, he said, "How did you find that?" It was just as if I had taken an anaesthetic, everything was quiet and painless down here. I couldn't believe it could be! And over the years you don't get quite that distinct relief you find, you know, but at first yes'. (Patient 209.)

'At the time they prescribed the Tagamet and I tried them for about a fortnight, and I couldn't have a cup of tea, nothing at all. I was having no sleep and I went back to my GP — that's when they first prescribed them [PPIs] like. At first he did say try and last the month with them, like a trial, and so I tried them and the difference in that month you know Of course I just carried on having them'. (Patient 221.)

However, patients tended to rate the efficacy of PPIs less highly than the GPs. Two-thirds of patients experienced at least occasional symptoms, even while taking PPIs.

'You can obliterate symptoms in more or less anybody'. (Dr W.)

'Well, I was still taking Gaviscon, but they [omeprazole] gave me pain relief probably for about eight to 10 hours at a time you know'. (Patient 217.)

Patients were also more concerned about side-effects and the safety of PPIs taken long-term than their doctors realised.

'I don't think that in general people are worried. Not many people have expressed concerns'. (Dr U.)

'I think it takes a long time to realise the long-term problems, and I think like I have been taking medication quite long, and I'm — years old [responder in thirties]. I mean, you don't want to go through the rest of your life taking tablets and what they might have damaged'. (Patient 235.)

'I don't believe in taking all these tablets. I was worried [about side-effects listed on the patient information leaflet], there was such a list. This is why I was glad

when he put me on a lower dose. He said if it didn't control it, he'd just put me up on to the 30. But as now, I've been OK'. (Patient 223.)

Reducing the cost of PPI prescribing

Patients accepted the need to reduce prescribing costs and regarded this as a valid reason for changing/reducing their PPI (see Box 2 for details of patients' responses to each strategy). Patients' replies suggested they tended to overestimate the size of the savings to be made. Switching brands at equivalent strength of tablet realises only a small reduction in costs. It is double switching that makes more substantial savings. Overt conflict between doctors and patients resulting specifically from prescribing changes involving PPIs was uncommon, but could present huge problems when it occurred.

'Last year I got a phone call one day when I was due for a prescription from one of the other doctors in the practice, who said, "Will you do something for us? How would you feel about going onto a different brand of medication? We'll just ask you if you would try it, it's supposed to be very similar, we just hope it will work." And then I said, "Of course", I'm thinking it's just another brand name and so I did go onto that. So I took it very normally, and I had the most dreadful symptoms, and people in school saying, "What's the matter with you? You look terrible." I was annoyed really because I took it on good faith and I presumed it was this, and he said he thought it would be the same. And I know he admitted that he had been told because of the finance they had to try the patients on something else. And I stuck it for a

1. Raising the prescribing threshold for initiating PPIs — as 73 (89%) patients had never heard of PPIs before their doctor prescribed them, most patients could not have been aware of any threshold change.
2. Dose reduction — about half of patients who were happy to try a lower dose wanted to return, or had returned, to their original dose.
3. Therapeutic substitution — having experienced non-PPI medicines either over the counter or from a previous prescribing episode, responders were unhappy to be switched to a medicine if they considered it not to be as effective as a PPI.
4. (a) Therapeutic switching — lansoprazole was an effective substitute for omeprazole where there was no change in dose. Where patients expressed a preference for a type of PPI it was usually for omeprazole.
5. (b) The confusion about strength of dose in double switching accounted for some of this preference. Those patients who were double switched knew of the change in brand but not usually the dose change. Any resurgence of symptoms led to the conclusion therefore that the new brand was less effective, rather than the reduced dose of PPI.
6. Self-regulation — this strategy was more likely to be initiated by patients than by doctors, with one-third of patients having experimented with their regime for taking PPIs at some time. Doctors underestimated the willingness of patients to achieve the minimum effective dose.

Box 2. Patients' responses to rationing strategies.

fortnight and I felt absolutely terrible by then, and I was back to the chest pains, the shoulder, the jaws. So I went back Monday morning and I stood in the surgery for about an hour and a quarter — and I was in such a state when I went to see him'. (Patient 113 changed from omeprazole 20 mg to lansoprazole 15 mg.)

The way in which prescribing changes were communicated was important, with patients preferring to hear directly from a doctor rather than indirectly through a pharmacist when their medicine was dispensed.¹⁴

'I think they should have said, "We're changing your drug", than just give you a prescription, and the drug had been changed after you'd been on it for such a long time. When she [the GP] came back and told me it was the same one, I accepted it. She said it was the same one, but once I got the side-effects with it, I went back [onto omeprazole]'. (Patient 128.)

The role of lifestyle: GPs' perceptions of patient lifestyle as a factor in PPI prescribing.

The stereotype of patients using PPIs to support an unhealthy lifestyle featured in over half of GP interviews.

'I think some people think, "there are these drugs I can have, and I can still carry on smoking and have my ten pints of lager at the weekend. I pay my stamp, and I want my drugs, and that's that". (Dr A.)

'Some of them are obviously free of symptoms and they can get on with their life, work or whatever. Other patients use it as a way of not changing their lifestyle. They have very irregular eating patterns, they drink too much, some of them are quite difficult. Life hasn't actually changed, and I suspect that if they did change their lifestyle they wouldn't need the PPI'. (Dr N.)

As with the stereotype of the demanding patients this was modified when doctors spoke of their own patients. GPs varied in their assessment of lifestyle factors as a cause of GI symptoms and in their assessment of how effective lifestyle changes would be in relieving those symptoms. Three-quarters (20) regarded adverse lifestyle as at least a contributory factor in the cause and continuation of GI problems. Seven of these doctors thought lifestyle was the main cause. Some GPs made a general association between adverse lifestyle and gastric symptoms. Others differentiated between some disorders that were mostly down to lifestyle and others that resulted from physiological factors. However, no clear or consistent classification of cause and pathology emerged from the interviews. For example, lifestyle factors — specifically being overweight — were attributed, by some doctors, as a primary cause of reflux and hiatus hernia. Others regarded these to be largely 'mechanical' in origin.

(Question:) 'What would you consider to be the main cause of reflux?'

(Answer:) 'Overweight, smoking, bad diet, stress'. (Dr G.)
'The huge majority of people with reflux have just got a mechanical reflux problem'. (Dr K.)

Nearly half of the doctors felt that by changing their behaviour many patients could improve their symptoms sufficiently to be able to manage without PPIs. A further eight thought that despite being able to make significant improvements through their own efforts, most patients would still require treatment — albeit less. Only one GP questioned the evidence base for the understanding that changing lifestyle would prevent or control stomach problems.

'... that would depend on some nice bits of research which showed that, if it's around, that actual lifestyle interventions do make a difference. I don't know. I mean there's a feeling that obesity might contribute to reflux, I am not sure if that has ever been proven. Certainly some people find that there are some things such as alcohol that makes their reflux worse, but beyond that I'm not sure. If it makes a difference having slightly more milk in their diet, if it makes a difference cutting out the kind of foods that makes gastritis worse, then I advise them that, and they follow their noses really. It's up to them really, but if you know patently that having a couple of birianis and a few pints doesn't make the reflux worse, then fine'. (Dr M.)

Patient descriptions of lifestyle

Most of the patients in the sample were middle-aged or elderly (Table 2) and liable to have other health problems as well as their stomach disorder. Nevertheless, most patients (59 [72%]) rated their current health as being either good or fair. More than two-thirds had made some effort to modify their lifestyle to alleviate their GI symptoms, typically by making dietary changes. The most common dietary change mentioned was to eat less fat. Patients who had a long-standing stomach problem had learned by trial and error what they could and could not eat, and for some this had been very restricting. Even while taking PPIs some patients often had to be careful about what they ate.

'Well, I haven't had the pains now for a long while because I'm on the tablets [PPIs]. But I find that if I eat homemade bread, and garlic foods, and especially

Table 2. Age of responders.

Age (years)	Frequency (%)
25-34	4 (4.9)
35-44	6 (7.3)
45-54	21 (25.6)
55-64	18 (22)
65-74	25 (30.5)
75-84	8 (9.8)

Table 3. Responders' employment status.

Employment	Frequency (%)
Full-time	13 (16)
Part-time	6 (7.3)
Unemployed	3 (4)
Housewife/husband	5 (6)
Disabled/unable to work	13 (16)
Retired	41 (50)
Other	1 (1)
Total	82 (100)

whisky — I can't drink whisky at all. I can't even have a spoonful — I can take no more than a glass of wine now. I know how far to go. (Patient 127.)

'Sunday, I had my Losec, but I still had a bad night from the hernia. When I have the Losec I do tend to eat say, perhaps cucumber — so if I do have something like that — even though I had the tablet Sunday, I was terrible. But it's up to me now even with the Losec, I have still got to watch what I'm eating.' (Patient 221.)

Others found that PPIs had enabled them to eat more healthily; for example, by including fruit in their diet. There was little evidence that patients whose diet could be described as 'bad' in biomedical terms had had healthy diets prior to starting on PPIs. Patients were not taking advantage of PPIs to make dietary changes for the 'worse'. No patients saw themselves as being heavy drinkers. Most were classed as light drinkers or teetotal. In many cases light drinking had been established as the habit of a lifetime. Others had modified their alcohol intake because they found it provoked stomach symptoms even when taking PPIs.

Smoking was the only real area of contention, but even here more than two-thirds of patients were non-smokers. While patients made a connection between eating, drinking, and stomach problems, few of the smokers saw how smoking could cause stomach problems. Many doctors emphasised the role of smoking in stomach disorders but they were not often successful at explaining the link.

(Question:) *'How would you explain the mechanism for smoking or drinking, and the effects on the symptoms?'*

(Answer:) *'Mechanism-wise? I don't know. I am sure there is a reason. I am trying desperately hard to think, but I can't. I don't know. You kind of read all these things where all these smokers get ulcers, and you think, "Fine. OK. Yes. Right ..." — more than the logical reasons, the whys of it.'* (Dr S.)

Effectiveness of lifestyle advice

Most patients remembered receiving some lifestyle advice from their GP. However, this was regarded as unhelpful where it was viewed as inappropriate to patients' circumstances, they had already tried it or they felt that their doctors handed out an identical package of lifestyle advice, no matter what the reason for consulting.

'He told me to be careful with what to eat. That was the main thing, not too much, cause I don't drink much, I don't smoke ... I was always careful what I ate anyway, so it [the advice] didn't make much difference.' (Patient 220.)

'Say if I went to the doctors, I know what they would say is either lose weight, stop smoking, which I've never smoked, or I'm on the change. You know, I am not knocking them, but ... you know.' (Patient 214.)

Thus, routine smoking advice to help alleviate stomach problems tended to be regarded with indifference among PPI patients. At worst it provoked resentment. Where advice

was given in a personal, non-patronising way and its evidence base was clear, then patients were more likely to be receptive.

'He [the doctor] spoke to me, and he tried to explain about the muscles and so on. And then when I asked him about diet when I went back, and he just said, "We don't know. Some people feel that they can eat all sorts of spicy things. Other people find that they can't eat oranges any more, or things with acid in". And he thought you could perhaps find your own level. In fact, he's been right. I can't eat oranges any more. I've tried.' (Patient 113.)

The majority of doctors showed some understanding of the socioeconomic circumstances that often made changing lifestyle difficult for patients.

'The reality of everyday living in this area, you can only expect so much from a patient. It is very difficult for them to alter their lifestyle unless the whole family is behind them. If they are all overweight, and they all smoke in the home, one poor bugger trying to do everything — it just doesn't work in practice.' (Dr G.)

While only a few patients thought there were further lifestyle changes they could make, half felt they did not know enough about their medical problem and its treatment.

Discussion

PPIs are an easy target for critics who suggest that they are frequently being prescribed inappropriately for relatively minor and trivial complaints. Indigestion is a common complaint,¹⁵ though not perceived as trivial by either the patients in this study or (usually) their doctors, at the point where GI symptoms led to a medical consultation. As an everyday experience, digestive problems are widely associated with over-indulgence and imprudent behaviour. It is an easy and obvious progression to extrapolate from this, and make the assumption that this applies to many of the patients consulting their doctors about the gastric disorders for which PPIs are prescribed. The patients in this study had long-term experience of gastric problems and most of them found that PPIs offered the best relief from symptoms. Our research does not support the assumption that repeat prescribing of PPIs is frequently inappropriate — at least not from the doctor-patient perspectives in this study.

Although we were not aiming to achieve a representative sample of GPs, we endeavoured to interview doctors from a range of practices and diverse backgrounds. Most of the GP responders were drawn from the research network linking the Medicines Management Department at Keele University with practitioners interested in research collaboration. This may have resulted in a relatively high proportion of 'progressive' prescribers. The PACT profiles of each practice's PPI (treatment and maintenance dose) and H₂ antagonist monthly prescribing between July 1996 and June 1998 demonstrated a range of prescribing patterns in relation to the average for the West Midlands. We have no reason therefore to suppose that our sample was oriented to GPs at either end of the prescribing spectrum for PPIs.

Lack of information about the patient non-responders is a limitation of the study. We do not know if these would have differed substantially from those who did take part. Some people did volunteer a reason for their refusal when sending back their reply slips. These tended to refer to prospective moves away from the area, or great age and infirmity. Patient refusals were evenly spread across all practices. The age and sex profile of our responders is comparable to all PPI patients as recorded on the West Midlands General Practice Research Database. However, it is possible that the non-responders represented particular subgroups of patients, whose experience was not incorporated in this study. In addition, further research is needed with patients who remain on, or return to, H₂ antagonists, as this group of patients was not included.

A number of studies have reached similar conclusions to our own, in that patients rarely articulate their wants or expectations in medical consultations. The majority of our responders came from working class backgrounds. However, there was little evidence to suggest that the more affluent and articulate patients were more likely to know about or ask their GP to initiate treatment with PPIs. On the other hand, it has been established that GP perceptions of patient expectations are an important determinant of prescribing.^{10,16-20} Thus it seems that a great deal of the impetus behind the prevailing stereotypes of the 'demanding' patient actually stems from doctors' externalisation onto patients of their internally experienced pressure to prescribe.

Overall, throughout the study, doctors did not feel they prescribed unreasonably or inappropriately. Most had made some effort to reduce their prescribing of PPIs. Situational pressures were identified that reduced the doctor's ability to implement their chosen strategy for prescribing PPIs.²¹ Most patients and almost all GPs recognised a need for economies and balanced budgets within the NHS. Although not all GPs chose to do so, sharing concerns about the cost of PPIs as a reason for limiting prescribing was broadly acceptable to patients. GPs employed a number of strategies to reduce prescribing and ration PPIs; the most straightforward of these were to stop prescribing PPIs, or reduce the dose.²² Evidence from patients' accounts shows that concealing the dose reduction in a simultaneous change of brand (double switching) was unlikely to be a successful strategy. Very few patients who had been double switched were aware that they had been moved to a lower dose of PPI when they changed brand. However, uninformed patients who reverted to their original PPI after rejecting a reduced dose were more likely to regard the substituted brand as inferior, being unaware that the changed brand had also been of reduced strength.

Very few responders corresponded to the stereotype of the typical PPI patient widely circulated in the doctors' accounts. The lifestyle debate is generally focused on a relatively young age group, and presupposes a degree of personal freedom and control. A high proportion of our responders were elderly and suffered from complex health problems in addition to their gastric disorder. Several had been prescribed PPIs to protect them from the adverse effects of other drugs. Few of these patients wilfully abused their health, though many were subject to constraints imposed by

age and infirmity. For many, the issue of adverse lifestyle was simply not relevant. In any case, the GPs found it difficult to cite or articulate empirical evidence for the link between lifestyle and gastric symptoms. Patients mostly discovered for themselves what behaviour exacerbated their symptoms and did not find routine lifestyle advice particularly useful in coping with their stomach problem.

The rational use of NHS resources clearly dictates that a reduction in prescribing is appropriate. However, these patients perceived their need to be both real and urgent. GPs find themselves in the middle between the conflicting demands of patients' needs on the one hand, and pressure to implement NHS policy on the other. Current medical stereotypes of the typical PPI patient have reduced the extent and legitimacy of patients' need for treatment, and arbitrarily written out the severity and significance of their symptoms. The consequence of depicting patient behaviour as 'demanding' and 'unhealthy' (adverse lifestyle) is that the boundary of patient entitlement to PPIs is redefined and prescribing thresholds for PPIs are raised. These stereotypes are widely circulated in medical culture, and were prevalent among the doctors in the study. Typification of patients provides a convenient rationalisation for policy decisions to reduce the prescribing of PPIs.

There may indeed be sound clinical²³ or economic²⁴ reasons for limiting the use of PPIs. NICE (National Institute for Clinical Excellence) guidance on the use of PPIs in the treatment of dyspepsia, if fully implemented, is estimated to be able to reduce prescribing by 15% resulting in a saving of £40 to £50 million annually in England and Wales. The NHS cannot afford to meet all patient needs, and other illnesses may be allocated a higher priority. Patients have no responsibility for the high cost of PPIs; however, rationing decisions should be transparent. Where hard choices have to be made in the allocation of scarce resources, the patient perspective must surely be canvassed and considered, alongside that of the health professional, and the politician.²⁵⁻²⁷ To mask economic decisions, albeit unwittingly, under the guise of clinical appropriateness or patient irresponsibility is itself inappropriate.

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