

Variation in the incidence, presentation and management of nine minor ailments in community pharmacy

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AIM • To measure the incidence of nine minor ailments in community pharmacy and to compare aspects of their presentation and management in that setting.

DESIGN • Data were collected by pharmacy staff using a short data collection form over two separate one-week periods. Data were collected on the presenting features and the management of acne, cold sore, cystitis, diarrhoea, hay fever, head lice, indigestion, red eye and vaginal thrush.

SUBJECTS AND SETTING • 18 community pharmacies in the North of England, which were members of a community pharmacy research panel.

OUTCOME MEASURES • Data on presentation, management and outcome of pharmacy minor ailment consultations as indicated on data collection forms.

RESULTS • The findings from this study indicate that the nine minor ailments showed marked variation in incidence, in the number of proxy consultations, the percentage of customers demanding a product by name and in rates of direct referral to GPs and other health professionals.

CONCLUSION • The Government is currently supporting moves to transfer the management of minor ailments from GPs to community pharmacists and other community-based health professionals. This small-scale study suggests that the minor ailments selected are not homogenous and vary in their incidence, presentation and management within community pharmacy. Further larger-scale work is needed to inform the debate on the management of minor ailments.

In recent years, the management of minor ailments in community pharmacy has been the subject of a small body of academic and consumer-based research.¹⁻³ Much of this research has focused on the quality of advice given to customers by pharmacists, although recent work has recognised the pivotal role played by counter assistants in dealing with minor ailments.⁴ The impetus for this research can be traced to a number of related developments in primary care and pharmacy over the past decade. These include the deregulation of a growing number of medicines for minor conditions from prescription-only to pharmacy medicines,⁵ the growth of support for the concept of self-care for minor ailments,^{6,7} and Government support for moves to transfer the burden of minor ailments from general medical practitioners (GPs) to other community-based health care professionals, as exemplified by the development of NHS Direct.^{8,9} However, for much of this research, minor ailments have been grouped together and the implicit assumption has been that they are homogenous. With pilot schemes under way in the United Kingdom to test ways of transferring the management of minor ailments away from "over-worked" GPs to community pharmacists,^{10,11} it is timely to explore whether this is indeed the case or whether particular ailments are unique in the way in which they present and are managed in community pharmacy. In this paper we will use data from a survey of minor ailments in

community pharmacies to demonstrate variation in incidence, presentation and management of nine minor ailments.

METHOD

The survey of the presentation of minor ailments was conducted in community pharmacies participating in a community pharmacy research panel. The survey was conducted in two phases: phase 1 took place in May, 1998, and phase 2 in April, 1999.

Community pharmacy research panel The community pharmacy research panel was established by researchers at the school of pharmacy, University of Manchester, to facilitate research in community pharmacies.¹² Pharmacies were initially recruited to the panel between October, 1997, and April 1998, through an announcement in *The Pharmaceutical Journal*, through contacting national pharmacy chains, through Centre for Pharmacy Postgraduate Education (CPPE) tutors and through snowballing.¹³

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(Snowballing refers to a form of recruitment where the researcher identifies individuals from the population of interest and then uses them as informants to identify other members of the population. In practical terms for this project, this meant that pharmacists who expressed an interest in joining the panel were asked to identify colleagues whom they thought might be interested and these were then approached and invited to participate.) Pharmacies in the panel were located in Greater Manchester, South Yorkshire and Humberside. These sites were chosen for logistical reasons, as they were accessible from the M62 motorway. Although, in essence, this was a convenience sample, attempts were made to ensure that the panel contained representatives from independent, small chain and multiple pharmacies and a mix of locations, including suburban, inner-city and rural situations. Of the 18 pharmacies, eight were classified as part of a large chain (more than 25 pharmacies), four were part of small chain (fewer than five pharmacies) and six were independent pharmacies. Participating pharmacists signed a formal letter of agreement with the university and received a fee for participating in this study.

Eighteen pharmacies participated in the first of the two data collection periods. In the second phase of the study, one of the original 18 pharmacists moved out of the catchment area and was unable to continue in the panel and another relocated to a new pharmacy but continued to participate in

the study, giving a total of 17 pharmacies. The panel contained a mix of both independent pharmacies and multiples whose monthly dispensing loads ranged from 2,000 to 10,000 items and whose NHS income was estimated to range from 40 to 90 per cent of their total turnover.

Conditions Nine minor conditions were chosen for the two data collection phases. Phase 1 conditions were acne, cystitis, hay fever, red eye and thrush. Phase 2 conditions were cold sore, diarrhoea, head lice, indigestion and red eye. It was hoped that these conditions were illustrative of the range of conditions managed in community pharmacy. These nine conditions were chosen because:

- They were chronic or episodic
- There was at least one over-the-counter (OTC) product available
- In some cases they were subject to seasonal variation
- They were felt to be sufficiently common to generate cases during the two data collection periods

Data collection In each of the data collection periods, pharmacy staff completed a short record form over a one-week period whenever a customer, or his or her representative, presented with symptoms or requested a named product known to be used for the treatment of any of the nine conditions. The data collection form was designed to be simple for pharmacy staff to complete at the point of sale or during the consultation and consisted largely of tickbox categories. In each pharmacy, the pharmacist provided staff with a short training session on how to fill in the form. Despite this, the pharmacy staff reported that data collection forms might not have been completed for all customers presenting with the nine conditions, especially at times when the pharmacy was busy. This is an acknowledged limitation of self-reporting.

It could be argued, therefore, that the figures for the nine conditions presented here are likely to be an underestimate of their incidence in these pharmacies. Customers buying a product for prophylactic use (eg, not for the current episode of illness) were excluded from the study.

Four of the nine minor conditions were chosen for further investigation; these were red eye and vaginal thrush in phase 1 and diarrhoea and indigestion in phase 2. Additional information was collected on these four conditions over a four-week period and customers were subsequently contacted by telephone for follow-up interviews seven to 14 days after the consultation. Data on red eye were collected in both the first and second data collection periods for comparative purposes, but only data from phase 2 will be presented here. The results from this part of the study have been presented elsewhere.^{14,15}

Data were analysed using SPSS for Windows. The chi-squared statistical test was used where relevant and values for this test were considered statistically significant

if the probability (P) was ≤ 0.05 .

RESULTS

Incidence of minor ailments A total of 895 episodes were recorded for the nine minor conditions over the two data collection periods. The mean rate of presentation per pharmacy during the study week varied according to the minor ailment, ranging from 0.6 for acne to 25.5 for hay fever (Table 1). The first phase of the study coincided with a particularly high pollen count, hence the high number of hay fever cases. The seasonal nature of some conditions, like hay fever, can cause problems in terms of demand for pharmacy services. Several of the pharmacies in this study reported running out of products to treat this condition, such was the demand.

Proxy consultations A proxy consultation can be defined as a third party presenting to a pharmacy on behalf of another individual; this could be a partner, family member or a friend. In this study the overall rate for proxy consultations was 33 per cent. Analysis of this figure by minor ailment reveals wide variation in proxy rates for the nine conditions, ranging from just 15 per cent for cold sore to 96 per cent for head lice (Table 1).

Reason for visit Customers visiting the pharmacy have a number of options when presenting with a minor ailment. They can ask pharmacy staff for advice on how to deal with symptoms, for a product recommendation or for a specific named product. The overall percentage of customers requesting a product by name in this study was 49 per cent.

It is clear that customer behaviour varied according to the nature of the condition. Thus, customers who presented to the panel pharmacies with symptoms of red eye were significantly more likely to ask staff for advice than to demand a product by name (75 per cent *v* 25 per cent, $P=0.031$).

In contrast, customers presenting with indigestion or vaginal thrush were much more likely to ask for a product by name (77 per cent *v* 23 per cent, $P<0.001$, and 73 per cent *v* 27 per cent, $P=0.004$, respectively). In previous community pharmacy research, the reported percentage of named product de-

TABLE 1: PRESENTING FEATURES OF THE NINE MINOR AILMENTS (N=895)

Condition	Presentation per pharmacy per week	Proxy consultation rate (%)	Named product demands (%)
<i>Phase 1 (18 pharmacies)</i>			
Hay fever (n=459)	25.5	27	47
Vaginal thrush (n=62)	3.2	24	73
Cystitis (n=33)	1.9	24	33
Acne (n=10)	0.6	60	70
<i>Phase 2 (17 pharmacies)</i>			
Diarrhoea (n=80)	4.7	45	53
Indigestion (n=71)	4.2	23	77
Red eye (n=49)	2.9	38	25
Head lice (n=48)	2.8	96	39
Cold sore (n=40)	2.4	15	45

TABLE 2: PHARMACY MANAGEMENT OF MINOR AILMENT CONSULTATIONS (N=895)

Condition	Pharmacist involvement (%)	Conditional referrals (%)	Direct referrals (%)
<i>Phase 1 (18 pharmacies)</i>			
Hay fever (n=459)	26	5	2
Vaginal thrush (n=62)	23	13	8
Cystitis (n=33)	33	16	6
Acne (n=10)	30	10	–
<i>Phase 2 (17 pharmacies)</i>			
Diarrhoea (n=80)	38	20	3
Indigestion (n=71)	25	13	1
Red eye (n=49)	57	53	2
Head lice (n=48)	17	11	–
Cold sore (n=40)	30	18	5

mands has ranged from 44 per cent for women presenting with cystitis to 84 per cent of all medicines.^{1,16,17}

Pharmacist involvement in consultation Counter assistants were involved in most consultations for all of the nine minor conditions, either alone, or in conjunction with the pharmacist (range: 73 per cent for red eye to 90 per cent for both acne and head lice). Pharmacists were involved in the consultation in more than half (57 per cent) of the cases of red eye, mostly at the request of pharmacy staff and in 38 per cent of the cases of diarrhoea (Table 2). The relatively high levels of requests to involve the pharmacist for both red eye and diarrhoea might reflect counter assistants' anxieties and concerns about dealing with these conditions

Pharmacy management of request An OTC product was sold in most cases for all nine conditions, with a range from 81 per cent for head lice to 96 per cent for indigestion.

Pharmacy referrals to another health care professional can take two forms: conditional and direct. In a conditional referral the patient will be advised to seek further advice or treatment if the symptoms do not clear within a specified time. In a direct referral, the member of pharmacy staff will advise the patient to seek immediate advice or treatment from a health professional (usually a GP). The overall referral rate (both conditional and direct) for these minor ailments ranged from nil (for head lice) to 55 per cent (for red eye). In this study, the percentage of direct referrals ranged from nil for head lice

and acne to 8 per cent for vaginal thrush (Table 2).

DISCUSSION

With the ongoing reorganisation of primary care and attempts to reduce the workload of GPs by redirecting patients with less serious conditions to other community-based health professionals, the management of minor ailments will continue to be the focus of both policy and research. The evidence from this small-scale survey of minor ailments suggests, however, that it would be a mistake to assume that all minor ailments are the same and that further investigation on a wider scale is merited. This study confirms that the incidence and presentation of minor ailments in community pharmacy can vary considerably and this is likely to influence the attitudes of pharmacy staff to the management of these conditions.

The findings of this study can be seen to represent a "snapshot" of the presentation of the nine minor ailments in two separate periods, in a small, non-random of sample of community pharmacies. As such, any attempts to extrapolate these findings to the wider population should be approached with caution. However, it could be argued that the pharmacies themselves, with their mix of multiples, independents and small chains, could be seen to be broadly representative of community pharmacies in the UK and that the study itself provides valuable insights which suggest that further research in this area would be welcome.

In order to assess the reliability of the findings, data on red eye were collected in both data collection periods. In addition, telephone interviews for the four selected conditions allowed for validation of the data collected and found high levels of accuracy of reporting.

This study suggests that some conditions are subject to seasonal variation (eg, coughs and colds, hay fever) whereas others are more constant. It has been noted that staff confidence in dealing with a particular minor ailment is one of the factors influencing the decision whether to refer to another health professional, as is the availability of a pharmacy medicine with which to treat the condition. It is possible to argue that pharmacy staff are likely to feel more comfortable dealing with a condition that they see on a regular basis than one that is relatively rare or for which there is potentially a more serious underlying cause or outcome. These findings could be of use for informing training initiatives for pharmacy staff.

Role of counter assistants In recent years there has been a growing awareness in pharmacy practice research of the significant role counter assistants play in the management of minor ailments in community pharmacy.^{1,4,17} The most recent report by the Consumers' Association, while highly critical of standards of advice-giving from counter assistants, did acknowledge that the counter assistant was the first member of staff that most customers spoke to on entering a pharmacy.³ In Ward *et al's* 1998 study,

counter assistants dealt with 84 per cent of all requests for deregulated medicines without any involvement or input from the pharmacist.⁴ This study confirms their high level of involvement.

Proxy consultations The rate of proxy consultations has been found to vary in previous pharmacy-based studies from 27 per cent to 43 per cent.^{2,18,19} Although some studies have explored proxy rates by individual condition, most have looked only at the overall proxy figure. This study demonstrated wide variation in proxy consultation rates by minor ailment. It is possible to posit some reasons for this variation. The extremely high level of proxy consultations for head lice could be explained by the fact that most cases of head lice are among children and all but two cases in this study were parents consulting on behalf of a child. In the case of diarrhoea, the relatively high proxy rate of 45 per cent could be ascribed to the fact that the symptoms of diarrhoea may make it difficult for the sufferer to visit the pharmacy in person.

The low rate of proxy consultations for cold sore might be explained by the fact that the symptoms are visible and the customer may want the pharmacist or counter assistant to see it in order to confirm the diagnosis.

Proxy consultations have been identified in a number of studies as a potential problem for pharmacy staff, as they can limit their ability to ask questions and the proxy may not have sufficient information to enable staff to make informed decisions as to appropriate management.¹⁸ In addition, a proxy might be asked by the sufferer to ask for a specific named product. It can, therefore, be difficult for pharmacy staff to challenge this decision, should they feel that the product in question is inappropriate.⁴

The phenomenon of the "determined purchaser" Much of the literature criticising pharmacists' and counter assistants' management of minor ailments in community pharmacy has been premised on the assumption that customers come into the pharmacy primarily to ask for advice or a product recommendation or both. The Consumers' Association, in particular, has published a number of highly controversial reports criticising the standards of advice and questioning in community pharmacy,^{3,20} although it has itself been challenged for its use of covert methods and for failing to reflect the reality of community pharmacy practice.^{21,22} However, recent academic, pharmacy-based studies have identified the emergence of what has been termed the "determined purchaser",²³ whose purchasing behaviour is influenced by a number of factors, including previous experience of the condition, previous use of OTC medicines to treat it, media advertising of pharmacy medicines and the views of family and friends. A determined purchaser is likely to ask for a product by name, and evidence suggests that some such customers may become hostile if challenged on their decision and that pharmacy staff feel uncomfortable challenging them.^{4,24}

The present study supports the notion of the determined purchaser. The reality of community pharmacy practice is that many customers enter the pharmacy with a specific idea of the product they want to buy. This appears to be more pronounced for some conditions than others.

The fact that customers presenting with certain minor ailments are more likely to ask for a named product is perhaps to be expected, since many minor ailments are recurrent. Vaginal thrush and indigestion could be seen to fit into this pattern; they are both conditions that can recur and therefore the customer might have experience of using an OTC or prescription product in the past. Interviews with women who presented to the community pharmacies in this study with symptoms of vaginal thrush suggest that many are highly knowledgeable, both about the condition itself and the products used to treat it, and therefore do not feel the need to ask pharmacy staff for advice.¹⁴

Another factor which may influence the extent to which products are requested by name is television and newspaper advertising of branded products. The perceived influence of television advertising on customers' decision-making processes is such that pharmacists in one study cited this as one of two main factors (the other being customer expectations) that were responsible for the "less than ideal" service they were offering to their customers.²⁵ OTC products for the treatment of indigestion and vaginal thrush, for example, are now advertised openly on television and in the printed media and this might have contributed, in part, to the high numbers of customers in this study asking for a named product for these conditions.^{26,27} It is, of course, important to note that advertising may lead the customer to ask for a product which is entirely inappropriate for their condition and therefore pharmacy staff may have to challenge this decision.

Client referral There are many possible reasons why pharmacy staff may make a direct referral to another health practitioner. These include symptoms which could potentially mask a more serious condition, the duration and severity of symptoms, if the patient has already tried an OTC medicine that has failed to work, and pharmacy staff believe a prescription-only product is warranted and also if the member of staff does not feel they have sufficient information or confidence to deal with the condition.^{18,28}

However, it has been argued that "in cases where more serious illness is suspected, pharmacy staff have an important triage function in referring customers whom they believe require further medical treatment".²⁹ Referral rates *per se* may be misleading as most are conditional, ie, the customer is recommended to visit the GP if his or her symptoms do not clear up within a couple of days. The Royal Pharmaceutical Society's Code of Ethics states that, whenever a product is sold, the pharmacist should always advise customers to see their GP if symptoms do not clear within a specified period.³⁰ It is, therefore, more instructive to

look at levels of direct referrals to another health practitioner (usually, although not exclusively, a GP).

Direct referrals by pharmacy staff have been found to range from 7 per cent to 12 per cent in the literature, although the use of different methodologies has made comparison difficult.³¹ Findings from this study, which showed direct referral rates ranging from nil to 8 per cent, corresponds with these findings and also suggests that some

minor ailments are more likely to be directly referred than others.

Conclusion The outcome of this study suggests that rather than being a homogeneous group, minor ailments vary markedly in their incidence, presentation and management in community pharmacy. In considering how to manage minor ailments in primary care, policy-makers and practitioners might need to consider the characteristic

profile of particular minor ailments and explore the implications of this for policy. The insights from this study could also help community pharmacists and their staff better understand customer needs and expectations and therefore meet these needs more effectively.

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REFERENCES

1. Krska J, Kennedy E, Howitt E. Audit of advice provided in response to symptoms. *Pharm J* 1994;252:93–6.
2. Smith F. A study of the advisory and health promotion activity of community pharmacists. *Health Ed J* 1992;51:68–71.
3. Consumers' Association. Counter advice: consumers are still not receiving the right advice when buying medicines from pharmacists. *Which?* 1999;ISSUE:22–5.
4. Ward PR, Bissell P, Noyce PR. Medicines counter assistants: roles and responsibilities in the sale of deregulated medicines. *Int J Pharm Pract* 1998;6:207–15.
5. Blenkinsopp A, Bradley C. Patients, society and the increase in self-medication. *BMJ* 1996;312:629–32.
6. British Market Research Bureau. Everyday healthcare study 1997 — A consumer study of self-medication in Great Britain. London: Proprietary Association of Great Britain; 1997.
7. Hoog S. The self-medication market — a literature review. *J Soc Admin Pharm* 1992;9:123–37.
8. Secretary of State for Health. Choice and opportunity. Primary care: the future. London: Stationery Office; 1996.
9. Department of Health. NHS Direct Online. Available at: www.healthcareguide.nhsdirect.nhs.uk. Accessed May 26, 2000.
10. Hassell K. Diverted traffic. *Health Services J* 2000;(Jan 6):22–3.
11. GP-pharmacy referral trial in Bootle. *Pharm J* 2000;264:168.
12. Pharmacy Practice R&D Task Force. Investing in evidence-based practice in pharmacy. London: Royal Pharmaceutical Society; 1997.
13. Nicolson M, Cantrill JA, Hassell K, Seston EM, Noyce PR. Research networks: the feasibility of developing and supporting a community pharmacy research panel. *Pharm J* 1999;263 (Suppl):R54.
14. Chapple A, Hassell K, Nicolson M, Cantrill J. "You don't really feel you can function normally": Women's perceptions and personal management of vaginal thrush. *J Reprod Infant Psychol* 2000;18:309–19.
15. Seston EM, Nicolson M, Hassell K, Cantrill JA, Noyce PR. Community pharmacy management of acute diarrhoea in adults. *Int J Pharm Pract* 2001;9:1–8.
16. Burke P, Richards R, Dodd T. Responding to symptoms in community pharmacy — urinary tract infections. *Pharm J* 1992;249 (Suppl):R19.
17. Hardisty B. Do assistants take the pharmacist's role in counter prescribing? *Chem Drug* 1982;218:804–8.
18. Hassell K, Noyce P, Rogers A, Harris J, Wilkinson J. A pathway to the GP: the pharmaceutical 'consultation' as a first port of call in primary health care. *Fam Pract* 1997;14:498–502.
19. Bissell P, Ward PR, Noyce PR. Advising the public: a study of the advice giving function of the community pharmacy. University of Manchester, School of Pharmacy and Pharmaceutical Sciences and Sefton Health Authority, 1996.
20. Consumers' Association. Vital checks are still not being made. *Which? Way to Health* 1994;ISSUE: 196.
21. Selling pharmacy medicines (editorial). *Pharm J* 1999;262: 453.
22. Balon ADJ. The Which? report — a reply. *Pharm J* 1999;262: 543.
23. Hassell K, Harris J, Rogers A, Noyce P, Wilkinson J. The role and contribution of pharmacy in primary care. National Primary Care Research and Development Centre, University of Manchester, 1996.
24. Morris C, Cantrill J, Weiss M. "One simple question should be enough": Consumer's perceptions of pharmacy protocols. *Int J Pharm Pract* 1997;5:64–71.
25. Krska J, Kennedy E. An audit of responding to symptoms in community pharmacy. *Int J Pharm Pract* 1996;4:129–35.
26. Gray N, Cantrill J, Noyce P. Mass media health information available to young adults in the United Kingdom: (1) Daily newspapers and magazines. *Int J Pharm Pract* 1998;6: 180–7.
27. Gray N, Cantrill J, Noyce P. Mass media health information available to young adults in the United Kingdom: (2) Television and radio. *Int J Pharm Pract* 1998;6:188–95.
28. Smith F. Referral of clients by community pharmacists in primary care consultations. *Int J Pharm Pract* 1993;2:86–9.
29. Bissell P, Ward P, Noyce P. Variation within community pharmacy. 3: Referring customers to other health professionals. *J Soc Admin Pharm* 1997;14:116–23.
30. Royal Pharmaceutical Society of Great Britain. Medicines, ethics and practice: A guide for pharmacists. London: The Society; January, 2000.
31. Tully M, Hassell K, Noyce P. Advice-giving in community pharmacies in the United Kingdom. *J Health Serv Res Policy* 1997;2:38–50.

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Pharmacists in need of convalescence are reminded that Birdsgrove House, the Royal Pharmaceutical Society's convalescent home, is at their service. Wives or husbands of members are eligible for admission, as are former members and, when room is available, parents of pharmacists.

Application should be made to the Administrator, Birdsgrove House, Mayfield, near Ashbourne, Derbyshire DE6 2BN (tel 01335 342144).

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