

The contribution of community pharmacy to improving the public's health

REPORT 2

**Evidence
from the UK
non peer-reviewed
literature
1990–2002**

Alison Blenkinsopp

Claire Anderson

Miriam Armstrong



The contribution of community pharmacy to improving the public's health

REPORT 2

**Evidence
from the UK
non peer-reviewed
literature
1990–2002**

Alison Blenkinsopp

Professor of the Practice of
Pharmacy, Department of
Medicines Management,
Keele University

Claire Anderson

Director of Pharmacy Practice
and Social Pharmacy,
The Pharmacy School,
University of Nottingham

Miriam Armstrong

Chief Executive,
PharmacyHealthLink



There are three reports in this series:

Report 1 Evidence from the peer-reviewed literature 1990 – 2001

Report 2 Evidence from the non peer-reviewed literature 1990 – 2002

Report 3 An overview of the evidence-base from 1990 – 2002 and
recommendations for action

Limited copies are available from PharmacyHealthLink at

1 Lambeth High Street, London SE1 7JN

Tel: 020 7572 2265

E-mail: pharmacyhealthlink@rpsgb.org.uk

Registered charity no: 1021335

Registered company no: 2768032

Published by the charity PharmacyHealthLink (previously known as the
Pharmacy Healthcare Scheme) and the Royal Pharmaceutical Society of Great
Britain, 1 Lambeth High Street, London SE1 7JN

First published 2003

© PharmacyHealthLink and the Royal Pharmaceutical Society of Great
Britain, 2003

Printed in Great Britain

ISBN 0 9538505 5 2

All rights reserved. No part of this publication may be reproduced, stored in
a retrieval system, or transmitted in any form by any means, without prior
permission of the copyright holder.

The publisher makes no representation, express or limited, with regard to
the accuracy of the information contained in this document and cannot
accept any legal responsibility or liability for any errors or omissions that
may be made.

The views expressed in this document are those of the authors and are not
necessarily intended to reflect the current policies of the Royal
Pharmaceutical Society of Great Britain or the charity PharmacyHealthLink.

CONTENTS

Joint Foreword by Sian Griffiths, Chair of PharmacyHealthLink and David Haslam, Chairman of Council of the Royal College of General Practitioners

Executive summary	1
1 Introduction	9
Aim of the review	9
Scope of the review	10
Activities included / excluded	10
Criteria for inclusion of evidence	11
Health Development Agency's standards: Evidence Base 2000	11
National Service Frameworks: categorisation of evidence	12
2 Method	13
Identifying non peer-reviewed research	13
Review of research quality	13
Data abstraction and construction of the review	14
3 Results	15
Studies included and excluded	15
Presentation of findings	16
Health topics	17
Smoking cessation	17
Coronary heart disease – the use of aspirin in prevention	18
Drug misuse	19
Sexual health	20
Emergency hormonal contraception	21
Immunisation	26
Head lice	27

Oral health	29
Mental health	30
Prevention of transmission of infection	31
Accidental injury prevention	32
Factors affecting the effectiveness of community pharmacy-based activities to improve health	33
Training	33
Use of pharmacy patient medication records	34
Design and use of pharmacy premises	35
Stakeholder views	40
Pharmacy users	40
Pharmacists	44
External stakeholders	50
4 Discussion	53
Scope and quality of the material	53
Where does the non peer-reviewed literature support the findings of the peer-reviewed literature?	53
What new evidence does the non peer-reviewed literature contribute?	54
Health topics	55
Factors affecting the effectiveness of community pharmacy-based activities to improve health	55
Stakeholder views	56
5 Conclusions	59
References	61
Appendices	
1 National Service Frameworks: categorisation of evidence	63
2 Details of reviewed evidence	64

ACKNOWLEDGEMENTS

Principal authors

Professor Alison Blenkinsopp, Professor of the Practice of Pharmacy, Department of Medicines Management, Keele University

Dr Claire Anderson, Director of Pharmacy Practice and Social Pharmacy, The Pharmacy School, University of Nottingham

Miriam Armstrong, Chief Executive, PharmacyHealthLink

Peer reviewer

Dr Alison Hill, Director of the Public Health Resource Unit, Institute of Health Sciences, University of Oxford

Steering Group

Dr Terry Maguire, Vice Chair, PharmacyHealthLink (and Steering Group Chair)

Dr Michael Varnam, Non-executive Director, Health Development Agency

Nigel Graham, Head of Practice Directorate, RPSGB

Dr Sue Ambler, Head of Practice Research Directorate, RPSGB

Zoe Whittington, Practice Research Manager, RPSGB

The Steering Group would also like to acknowledge the important contributions of certain individuals and organisations to the production of this document. In particular Gul Root and Stephen Johnson from the Department of Health (England), Chris Miller from Schering UK, the UK Schools of Pharmacy and Professor Roger Walker, Cardiff University and Professor Christine Bond, Aberdeen University for their comments on earlier drafts.

FOREWORD

Since the first report in this series¹ became available, the modernisation of the National Health Service across the United Kingdom and community pharmacy's role within that has steadily progressed. The plans set out by the UK Government² and devolved administrations³ outlined a vision for developing the NHS and pharmacy services that gave the needs of those who use the service much higher priority and, especially, focused on improving access to care.

Many initiatives that were outlined in those plans – for example proposals for supplementary prescribing and Local Pharmaceutical Service pilots – have now begun to be put into practice and their potential for improving services to patients will soon become apparent. Both general medical practice and pharmacy have been equally affected by these developments, which have often served to bring the two professions closer together to deliver better patient care.

One area for development that still remains relatively unexplored is the potential contribution that community pharmacy can make to improving the public's health and how it can work more closely with general medical practice to achieve this. In some instances – for example in smoking cessation⁴ – there is a relatively good history of co-operation between general practice, the NHS smoking cessation services and community pharmacy across the UK which has served to ensure that patients

1 Anderson C, Blenkinsopp A and Armstrong M (2003). *The contribution of community pharmacy to improving the public's health. Report 1: Evidence from the peer-reviewed literature 1990 – 2001*. Launched at the British Pharmaceutical Conference in September 2001 and is available on the website: www.rpsgb.org.uk/patientcare/.

2 For example, see the Department of Health policy documents: *The NHS Plan: a plan for investment. A plan for reform* (2000) and *Pharmacy in the future: implementing the NHS Plan* (2000).

3 For example, see the Scottish Executive documents: *Our National Health: A plan for action, a plan for change* (2000) and *The right medicine: a strategy for pharmaceutical care in Scotland* (2002); and the National Assembly for Wales document: *Improving health in Wales – a plan for the NHS and its partners* (2001) and the Welsh Assembly Government consultation document: *Remedies for success: a strategy for pharmacy in Wales* (2002).

4 A survey of all UK NHS commissioning bodies was undertaken in 2002 to assess the existing number of health improvement projects that involved community pharmacies. The findings indicated that the most common health topic by far for community pharmacists to be involved with was smoking cessation and that these projects were evenly spread throughout the UK. See the report *Local pharmacy health development projects – testing models of implementation in community pharmacy* (2002) – unpublished work available on request from pharmacyhealthlink@rpsgb.org.uk or 020 7572 2265 – for more details.

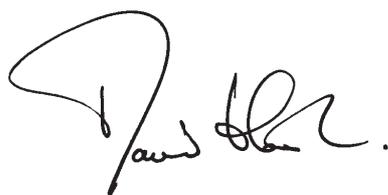
have access to a comprehensive 'stop smoking' service at a local level. In other areas of prevention however – for example sexual health and drug misuse services – there is much less evidence that these services are either in existence or that there are plans for their development.

The main purpose of the second report is to outline additional evidence from the non peer-reviewed literature indicating which health improvement topics might be appropriately tackled within a community pharmacy setting and how these are best delivered. Relevant findings from the first report have also been included to help this assessment.

In addition this report provides much more detail on the relationship between, and attitudes of, the different stakeholders concerned with improving the public's health in a community pharmacy setting. Pharmacy users' views, in particular, provide a very interesting perspective on service provision that we hope will encourage health service planners and general medical practitioners to think more broadly about how the 'added value' of easy access to community pharmacies might help deliver their public health objectives.



Professor
Sian Griffiths
President
Faculty of Public
Health Medicine



David Haslam
Chairman of Council
Royal College of General
Practitioners

EXECUTIVE SUMMARY

Aim

To identify and critically appraise the non peer-reviewed UK research on the contribution of community pharmacists to improving the public's health.

Background

Community pharmacies and pharmacists have the potential to contribute to the public's health and there is a history of over two decades of developmental work in this setting in the UK. The position of community pharmacies straddles both public and private sectors, the former primarily through a nationally-negotiated NHS contract to dispense prescriptions. Pharmacies' dual health and commercial roles offer a unique opportunity to target activities towards healthy people as well as those with existing health problems. For this to occur in the most effective way, service commissioners need access to the evidence of potential benefit – hence the current literature review.

Method

Sources of non peer-reviewed literature were identified through key informants, and a survey of academic departments of pharmacy and related subjects. Criteria were developed for a review of research quality and a list of inclusion criteria for the review was constructed.

Results

In total, 45 studies were identified, 37 of which were included in the review. The most common reason for exclusion was a low survey response rate. Community pharmacists (27 studies), pharmacy users (22 studies) and primary health care team members (7 studies) were the most frequently included participant groups. Twelve studies involved the investigation of both pharmacist and stakeholder attitudes towards pharmacists' role in health improvement. Thirteen studies addressed general health issues and 24 covered specific health topics, of which the

most commonly studied were sexual health, including emergency hormonal contraception (9 studies) and head lice management (4 studies).

Many of the findings from this review confirmed, or added further information to, the findings from the peer-reviewed literature (Report 1 of this series). To help identify the key discussion points the main findings of this report have been presented as answers to various questions.

Where does the non peer-reviewed literature provide confirmatory evidence of the findings of the peer-reviewed literature?

The non peer-reviewed literature supported the findings from the peer-reviewed literature in the following areas:

- Both community pharmacists and pharmacy users perceive pharmacists' roles in improving the public's health to be primarily medicines-related.
- Public use of community pharmacies is almost universal but is low for general health advice.
- The actual experience of service users is generally more positive than their prior perceptions of access to, and value of, advice and services from community pharmacies.
- Pharmacists have concerns about the receptiveness of GPs and the public to any extended role for them in health improvement and, as a result, their willingness to opportunistically offer general health advice is reduced.
- Pharmacy patient medication records were found to be effective in identifying 'at risk' patients to prompt and enable pharmacist intervention for influenza vaccination.
- Training has a positive effect on pharmacists' consultation and information-giving behaviour.

Where does the non peer-reviewed literature provide new evidence?

New or additional evidence was found in the following areas:

Health topics

- *Drug misuse services* – the studies reviewed found that most drug misusers value community pharmacy-based services highly. Positive pharmacist attitudes were correlated with higher levels of service provision for drug misusers but practising pharmacists had more negative opinions than undergraduate pharmacy students.
- *Sexual health* – public interest in the availability of advice on contraception and safer sex through pharmacies is high. Whilst pharmacists express considerable support for their involvement in promoting safer sex and contraception, they report that they are rarely asked for such advice, and they are reluctant to offer it proactively.
- *Emergency hormonal contraception (EHC)* – the review extended the available evidence on EHC supply through community pharmacies, particularly through feedback from some 1600 users in three major studies. Pharmacy supply of EHC enables most women to receive it within 24 hours of unprotected sexual intercourse and services were highly rated by women. Feedback from pharmacist providers was mainly positive and there was a clear wish to extend the use of Patient Group Directions to enable supply to under-16-year-olds.
- *Head lice management* – evidence based on evaluations of over 8600 head lice consultations in two community pharmacies was reviewed. Quality indicators included the percentage of consultations where no treatment was provided, requirements for proof of infestation, adherence to local treatment formularies and feedback from users, pharmacist providers and other health professionals. Overall

one-quarter to one-third of consultations resulted in no treatment being supplied. Adherence to treatment formularies by community pharmacists was close to 100%. Feedback from scheme users, pharmacist providers and other health care professionals was predominantly positive.

Factors affecting community pharmacy-based activities to improve health

The review extended the evidence on pharmacy users' views on privacy and confidentiality in the pharmacy. Most pharmacy users of potentially sensitive services – for example EHC and head lice management – reported adequate facilities for privacy in community pharmacy but a sizeable (up to 20%) minority consistently expressed some concerns. The perceived concerns of pharmacy users about privacy, however, are generally not borne out in the reports of actual experience, although community pharmacists and users appear to have different perceptions of what constitutes acceptable facilities for maintaining privacy. Up to 20% of women obtaining EHC from community pharmacies reported having concerns about confidentiality and this was higher among those under 19 years of age.

The review showed that while community pharmacists consider leaflets to be an important component of their toolkit for improving the public's health, passive displays of leaflets may be missed by half of pharmacy customers. Multimedia technology appears to be a means of engaging young and healthy pharmacy customers in health improvement activities.

Stakeholder views

The non peer-reviewed evidence shows that the new community pharmacy service developments in EHC supply and head lice management were well received by other primary care health professionals. The extent of sustained joint working between community pharmacists and other members of the primary health care team was low (although it is noteworthy that these studies were from

the mid-1990s). There was some evidence that joint working might be improved by joint training.

Where does the non peer-reviewed literature indicate potential for further development?

The following areas were identified as being worthy of further research and investigation of feasibility:

- *Use of aspirin in the prevention of coronary heart disease* – pharmacists are perceived by people taking prophylactic aspirin as an appropriate potential source of advice on aspirin and heart disease. These patients have unmet information needs that they perceive could be met by pharmacists but generally this is not done at present.
- *Oral health* – the evidence indicates that a more proactive approach by community pharmacists is needed to maximise opportunities for improving oral health. Most requests for paediatric over-the-counter medicines in pharmacies were for named medicines, indicating that active intervention from the pharmacist would be needed to change purchasing patterns towards sugar-free alternatives. Training and participation in oral health promotion activities appeared to increase pharmacists' efforts to try to change people's medicine-buying behaviour.
- *Mental health* – little evidence was found on community pharmacist involvement in improving mental health. A study of pharmacy users, however, showed that they purchase products to reduce stress and anxiety and take up leaflets available in pharmacies on these topics – particularly on sleep problems and relaxation – indicating that there may be a role for pharmacists to proactively offer more support. The vast majority of pharmacy users, though, did not name the pharmacist as their preferred source of advice on stress and anxiety.
- *Prevention of transmission of infection* – community pharmacists were found to have generally positive attitudes towards involvement in prevention of transmission of infection but to have variable

knowledge about the transmission of HIV, hepatitis B and hepatitis C. In conjunction with the findings from immunisation and drug misuse services, there appears to be potential for further exploring the health protection role of community pharmacists.

- *Accidental injuries: falls prevention* – a pharmacy-based osteoporosis screening service involving pharmacist and nurse input in one pharmacy was found to be feasible and identified women at risk of osteoporosis. Women using the scheme valued the accessibility offered by community pharmacy.
- *Accidental injuries: medicines-related injuries* – a study of unwanted medicines returned to community pharmacies during a local campaign showed that changes in therapy and adverse effects from treatment were key reasons why excess quantities of medicines occurred in people's homes. Subsequent discussions between the pharmacists and local GPs appeared to be useful for making changes in prescribing frequency to reduce wastage.

Discussion

The search of non peer-reviewed literature identified some high quality research studies that usefully contributed to the evidence base. In particular, studies provided a wealth of further evidence of users' and stakeholders' feedback on pharmacy services, identification of the key elements of effective pharmacy-based health improvement activities and on the effectiveness of various approaches to different health topics.

The non peer-reviewed studies were graded using the same framework for research quality as that used for peer-reviewed studies and hence were considered against the same standards.

The non peer-reviewed literature confirms some of the key findings from the peer-reviewed literature (Report 1). Firstly, community pharmacists are generally viewed by the public as experts who advise on medicines rather than on health and illness. Secondly, members of the

public report they are willing to receive further information on health issues from community pharmacists but are not currently receiving this advice. Thirdly, community pharmacists can provide effective health improvement activities for: smoking cessation; coronary heart disease prevention; immunisation (and identification of high risk cases for intervention by using patient medication records); supply of EHC; head lice management; and drug misuse services. Lastly, training has the potential to significantly change community pharmacists' behaviour and positively orientate their practice towards health improvement.

In addition the 'grey' literature provided further details about the perceived problems and acceptability of community pharmacists providing advice and services on sensitive health issues, such as the supply of EHC and head lice management. Specifically there were important findings on pharmacy user perspectives of privacy and confidentiality. Most users of these services reported satisfaction with the level of privacy available, but 20–25% felt there was insufficient privacy. These findings suggest that pharmacists need to consider whether their premises provide sufficient privacy to meet the needs of all users. Data on perceptions of confidentiality of pharmacy information came from EHC service users and indicate that about 20% had concerns about confidentiality. These findings suggest that the pharmacy profession should consider additional ways of informing the public about the requirement for pharmacists to maintain confidentiality.

The non peer-reviewed literature also demonstrates the potential of community pharmacies to contribute to reductions in health inequalities. People living in deprived areas and who are less affluent are among the most frequent users of pharmacies.

Conclusion

The non peer-reviewed literature strengthens the overall picture of evidence by: confirming the key findings of Report 1; adding new material on specific health topics

and on the relationships between community pharmacists and the primary health care team; and providing further insights into pharmacist and user attitudes and behaviours.

Users express a high degree of interest in the availability of further information and advice from pharmacists, although the pharmacist is not seen as a primary source. The research findings suggest considerable scope for joint working of pharmacists, pharmacy users and healthcare commissioners to develop pharmacies as a local and accessible advice point complementary to existing services.

Further research is needed to investigate the potential role of the community pharmacist in sexual health, oral health, mental health, the prevention of transmission of infection and accidental injuries. Research is also needed to track the development of collaborative working between community pharmacists and other members of the primary health care team within the new NHS infrastructure, and to measure any change in the public's perception of the pharmacist's role in providing health improvement activities. Evaluation of innovative approaches to services and premises development will also be crucial to informing service design to meet the needs of users, particularly in relation to queries about approaching the pharmacist for general health advice and perceptions about privacy and confidentiality.

1 INTRODUCTION

During the last decade there has been considerable interest and activity in research into the public health role of community pharmacies. Despite an increasing number of initiatives (including a recent European Commission project)¹ there were no recent reviews of the strength of evidence for the wider implementation of public health programmes in community pharmacies. In addition there was a broader need to clarify definitions used to describe public health activities in pharmacies, to identify which activities were most suited to a community pharmacy setting and to determine which activities warranted further research investment.

To help address these issues the charity PharmacyHealthLink and the Royal Pharmaceutical Society of Great Britain commissioned a critical review of the UK and international literature relating to the community pharmacy's contribution to improving the public's health as part of a wider work programme to determine what activities are most likely to be effective in a community pharmacy setting and how they might best be provided.

Report 1 reviews the findings of the peer-reviewed literature, which includes peer-reviewed journals and conference proceedings. Report 2 reviews the non peer-reviewed literature and examines aspects of implementation in more detail. The final report (Report 3) summarises all the material reviewed and makes recommendations for action.

Aim of the review

The aim was to identify and critically review the non peer-reviewed UK research on community pharmacists' contribution to improving the public's health. Non peer-reviewed ('grey') literature was defined as research that was produced as a formal report or thesis but where the findings were not available in peer-reviewed journals.

¹ See www.univie.ac.at/phc for more details on this initiative.

Scope of the review

Definitions

The review included activities described by the following widely used definitions of health promotion and public health:

- Health promotion

The *Ottawa Charter for Health Promotion* (WHO, 1986)² states that 'Health promotion is the process of enabling people to increase control over, and to improve, their health'.

- Public health

Public health has been defined as 'the science and art of preventing disease, prolonging life and promoting health through the organised efforts of society' (Acheson inquiry into the future development of the public health function, 1988).³

Activities included / excluded

Specifically, the review included pharmacy activities for both individuals and wider communities relating to:

- Promoting health and well-being (e.g. nutrition, physical activity).
- Preventing illness (e.g. smoking cessation, immunisation, travel health).
- Identifying ill health (e.g. screening and case finding).
- The maintenance of health for those with chronic or potentially long-term conditions (e.g. diabetes, asthma, hypertension).

The advice-giving role of the pharmacist in relation to the treatment of acute self-limiting conditions, the management of minor illness, prescribing and prescription reviews was not included because it has been covered elsewhere.⁴

² WHO (1986). *Ottawa Charter for Health Promotion. First international conference on Health Promotion, Ottawa, 21 November 1986*. Geneva: World Health Organisation.

³ *Public health in England: the report of the Committee of Inquiry into the future development of the public health function*, Cm 289, 1988. London: The Stationery Office.

⁴ See, for example, *The Public's Use of Community Pharmacies as a Primary Health Care Resource (1998)* – research carried out by the University of Manchester School of Pharmacy and the National Primary Care Research and Development Centre for the Community Pharmacy Research Consortium.

The literature review focused on activities taking place within the community pharmacy setting or activities carried out by community pharmacists and their staff in other settings, for example, nursing homes. The work of pharmacists in primary care and strategic roles was included where relevant.

Criteria for inclusion of evidence

The majority of dissemination of research is based on a hierarchy of evidence with the randomised controlled trial (RCT) as the 'gold standard'. The literature in the field of pharmacy practice/public health contains few RCTs, and a substantial number of experimental studies and descriptive work. This review used two approaches to assess the quality of evidence: (1) the Health Development Agency's Evidence Base 2000⁵ standards for transparency, systematicity and relevance; and (2) the categorisation of evidence according to the system used by the Department of Health in its National Service Frameworks.⁶

Health Development Agency standards: Evidence Base 2000

- *Transparency* – evidence must include a clear and transparent account of how it was collated, which sources of information have been consulted, who was involved in collating the evidence, how the work was funded, a full disclosure of any analysis and findings.
- *Systematicity* – evidence identified must display clearly, regardless of the individual study, report or review methodology, the process through which the evidence was gathered and assessed.
- *Relevance* – evidence must be judged to be relevant to health improvement, and in this instance to the role of community pharmacy.

⁵ See, for example, Health Development Agency's website (www.HDA-online.org.uk/evidence/eb2000): Evidence base – quality standards for evidence.

⁶ See, for example, page 11 of the *National Service Framework (NSF) on Services for Older People*, Department of Health, March 2001.

National Service Frameworks: categorisation of evidence

The Department of Health categorises individual studies according to the standard classification set out in its National Service Frameworks:

Evidence from research and other professional literature

- A1** Systematic reviews that include at least one randomised controlled trial (RCT) e.g. systematic reviews from Cochrane or NHS Centre for Reviews and Dissemination.
- A2** Other systematic and high quality reviews which synthesise references.

- B1** Individual RCTs.
- B2** Individual non-randomised, experimental/intervention studies.
- B3** Individual well-designed non-experimental studies, controlled statistically if appropriate. Includes studies using case control, longitudinal, cohort, matched pairs or cross-sectional random sample methodologies, and well-designed qualitative studies, well-designed analytical studies including secondary analysis.

- C1** Descriptive and other research or evaluation not in B (e.g. convenience samples).
- C2** Case studies and examples of good practice.

- D** Summary review articles and discussions of relevant literature and conference proceedings not otherwise classified.

2. METHOD

Identifying non peer-reviewed research

Two sources were used:

- Key informants in England, Scotland, Wales and Northern Ireland.
- Schools of Pharmacy and postgraduate pharmacy and medicines management departments ($n = 20$) in England, Scotland, Wales and Northern Ireland.

Key informants were contacted and asked to identify any reports of research involving pharmacists improving health that had not subsequently been the subject of publication in peer-reviewed journals. Copies of the reports identified were obtained. The period for collecting evidence was January 1990 to October 2002.

A named individual in each School of Pharmacy was contacted by e-mail in February 2002, with a reminder in March 2002. Respondents were informed of the context of the review (the role of the pharmacist in public health and health promotion) and asked to identify relevant MSc, MPhil and PhD research submitted between 1990 and 2002. They were asked to send a copy of the title page and abstract from each relevant thesis. Where the abstract contained insufficient information the individual research student was contacted to obtain it.

Review of research quality

Each item was read by one of the authors (AB) and the following inclusion criteria were applied:

- (i) Reported original research.
- (ii) Sufficient methodological detail on study design, sampling and response rate.
- (iii) Adequate methodological design.
- (iv) For surveys, response rate: over 50%.
- (v) Topic within improving health remit.
- (vi) Reported within review timeframe.

Data abstraction and construction of the review

Data (see Appendix 2) were extracted from each item and summarised under the following headings:

- Identifiers: title, author/s, source type (report, thesis), year of publication, evidence grade (using Department of Health National Service Frameworks categories – see Appendix 1)
- Objectives
- Study design
- Sample and response rate
- Key findings
- Other comments

A draft containing six items (four proposed for inclusion, two for exclusion) was then read by a second author (CA) and the project Steering Group. There was agreement about application of the inclusion/exclusion criteria.

3. RESULTS

Studies included and excluded

Of the 45 studies identified, 37 were subsequently included in this review. Research abstracts on subjects within the remit of the review were received from eight university departments. One report was identified that was published immediately before the timeframe of the review (1989) and the decision was taken by the Steering Group to include it on the grounds that it was a major study, the findings of which were not otherwise disseminated.

Table 1. Studies considered for the review

Type	Number identified	Included	Reasons for exclusion
Commissioned work	24	22	Not research Low response rate
MSc/MPhil/PhD	13	11	Low response rate Outside remit
Other	8	4	Low response rate (2) Not research (1) Outside remit (1)

The results presented in the next section relate to the 37 studies included in the review. The most common reason for exclusion from the review was a low survey response rate.

The identified studies involved pharmacists, other primary health care team members and pharmacy users. Table 2 summarises the study participants. Most studies included pharmacists or users as the respondent group.

Table 2. Study participants

Pharmacists (community)	27
Pharmacy users	22
Primary health care team members	7
Pharmacy assistants	3
Pharmacists (other)	3
Other	2

Ten of the studies involved community pharmacists alone and eight involved users alone. Twelve studies involved investigating both pharmacist and stakeholder attitudes towards pharmacists' role in improving the public's health. Four studies included data collection on medicines purchased from or returned to pharmacies. Six projects included small scale feasibility trials and one PhD thesis described the development and implementation of an RCT on community pharmacists' advice on smoking cessation. The latter was one of five sources where peer-reviewed publications had eventually resulted.

Thirteen studies addressed general issues in health improvement from the perspectives of pharmacists, pharmacy users and stakeholders and four focused on a specific health topic (Table 3).

Table 3. Specific health topics and the number of studies involved

Sexual health (including emergency hormonal contraception)	9
Head lice management	4
Drug misuse	3
Accidental injury prevention	2
Smoking cessation	1
Oral health	1
Coronary heart disease – the use of aspirin in prevention	1
Mental health	1
Immunisation	1
Prevention of transmission of infection	1

Presentation of findings

The findings are presented in three main categories:

- Health topics.
- Factors affecting the effectiveness of community pharmacy-based activities to improve health.
- Stakeholder views.

The findings in the Results section have been presented in a similar format to Report 1 on the peer-reviewed literature with the key statements of evidence being highlighted in the text. This is followed by a brief summary of the studies. Further points for analysis or discussion appear in side bars to the text. The key evidence statements are presented in descending order of strength of evidence (as classified by the Department of Health National Service Frameworks grading of evidence – see Appendix 1).

Some key evidence statements arising from the peer-reviewed literature have been replicated here where relevant to the findings of the non peer-reviewed literature.

Please note that the findings presented here summarise the evidence reviewed for these two Reports only and therefore each evidence statement needs to be considered within the broader framework of factors affecting community pharmacy-based services. These factors have been given some consideration in the form of analysis / discussion points for each topic presented in the Results section of Reports 1 and 2, but a more general overview of these factors and their influence is presented in the Discussion sections of each report. The analysis/discussion points in this document refer to the non peer-reviewed literature only.

Health topics

Smoking cessation

Relevant finding from peer-reviewed literature:

- Community pharmacists trained in behaviour change methods are effective in helping clients stop smoking (B1).

Key finding from non peer-reviewed literature:

- Training increases knowledge, self-confidence and positive attitude of pharmacists and their staff in relation to smoking cessation (B1).

The systematic involvement of other pharmacy staff in service provision was a feature of Sinclair's trial of the effect of training (B1: Sinclair 1997, p65). Pharmacy staff and pharmacists were invited to attend joint training events with the intention of developing a practice team approach to the service. Training significantly increased knowledge, self-confidence and positive attitudes about the outcome of counselling in intervention teams compared with controls.

Coronary heart disease – the use of aspirin in prevention

Relevant findings from peer-reviewed literature:

- Community pharmacy audits can identify self-initiated aspirin treatment and encourage referral for medical advice (B3).
- Community pharmacy-based monitoring of the use of prophylactic aspirin treatment shows promise but more evidence is needed (B3).

Key findings from non peer-reviewed literature:

- The pharmacist is perceived by pharmacy users to be an appropriate potential source of advice on aspirin and heart disease (C1).
- Pharmacists are not perceived by patients taking aspirin to be currently providing the advice they need (C1).
- Patients taking aspirin prophylactically have unmet information needs that could be provided for by community pharmacists (C1).

The pharmacist was found to be considered a highly appropriate source of advice on both aspirin and coronary heart disease (CHD) prevention in a telephone interview study with 108 people receiving aspirin (C1: Kinghorn 1998, p65). However, pharmacists were not considered to be providing this service currently, and perceived lack of privacy in pharmacy premises was an issue. The research identified information needs in relation both to aspirin itself and CHD and its prevention.

Analysis / discussion point:

The research findings show potential benefit from a whole staff approach in community pharmacy, although there are no comparative data when pharmacists alone have provided the service. Further research into the effects of community pharmacy team approaches on service provision capacity, quit rates and number of people setting a 'quit date' is needed.

Analysis / discussion point:

The research findings suggest that patients taking aspirin prophylactically need more information and advice than they receive at present and would find the community pharmacist an acceptable source for this. Pharmacy users, however, report not receiving this advice possibly because patients are reluctant to ask for further information, but also perhaps because a lack of privacy was cited as an issue by some. Given the clear evidence of benefit from prophylactic aspirin use in the prevention of CHD and that monitoring of the use of aspirin purchased over the counter from community pharmacies is feasible, primary care organisations should be aware of how community pharmacy-based services might be integrated into local service provision as a means of reducing rates of heart disease.

The findings indicate patient information needs that could be met through pharmacies.

Drug misuse

Relevant findings from peer-reviewed literature:

- Community pharmacy-based supervised methadone administration services can achieve high attendance rates and can be acceptable to clients (B3).
- Specific training needs have been identified for pharmacists participating in pharmacy-based needle-exchange schemes (C1).

Key findings from non peer-reviewed literature:

- Most drug misusers value community pharmacy-based services highly (B3).
- Practising pharmacists appear to have more negative opinions about drug misusers than undergraduate pharmacy students (B3).
- Positive pharmacist attitudes are correlated with higher service provision for drug misusers (B3).
- Training for pharmacists needs to include skills in translating technical terms into a suitable language for drug misusers (C1).

Three studies were identified, the first investigated the attitudes of pharmacy undergraduates, pharmacists and clients towards the pharmacist's role in HIV and drug misuse (B3: Sheridan 1995, p66), the second described client queries addressed to a pharmacist in a primary care drugs agency service (C1: Scott 2000, p67) and the third a study of community pharmacists and drug users' perspectives on service provision (B3: Matheson 1999, p66). Pharmacy undergraduates and practising pharmacists were found to have positive professional opinions and some negative personal opinions about HIV and drug misuse. The practising pharmacists tended to have more negative personal opinions, suggesting an effect from practice experience. Drug information queries from drugs agency workers formed the most frequent

Analysis / discussion point:

The research has identified a range of issues from service user and provider perspectives that have implications for professional education and training of pharmacists and for the planning and organisation of services. Understanding the reasons for negative attitudes from pharmacists not involved in service provision will require the collection of evidence-based data to support or refute pharmacist perceptions. Continued feedback from service users can supply an important part of this.

category of requests to the pharmacist, with numbers slightly higher for prescribed than non-prescribed drugs (C1: Scott 2000, p67). The key specialist skill required was reported to be translating technical information into terms used as part of the 'drug culture'.

In a national study of attitudes of Scottish community pharmacists and their practice in relation to services for drug misusers, a postal questionnaire and interviews were used. The questionnaire mapped provision of services by community pharmacies and explored pharmacists' attitudes. More positive attitudes were correlated with higher levels of service provision. Pharmacists had concerns about the effects on other customers of service provision for drug misusers. Drug misusers valued services provided by community pharmacies. The study showed the importance of the relationship between pharmacists, their staff and service users. Some drug misusers reported negative experiences that had increased their feelings of stigma (B3: Matheson 1999, p66).

Sexual health

Relevant findings from peer-reviewed literature:
none relevant.

Key findings from non peer-reviewed literature:

- Public interest in the availability of advice on contraception and safe sex through pharmacies is high (B3).
- Quality and confidentiality were identified by pharmacy users as important considerations in selecting a pharmacy for advice on women's health (B3).
- Pharmacists express support for involvement in promoting safer sex and contraception but are rarely asked for such advice and are reluctant to offer it (B3).
- Male pharmacists perceive themselves as less knowledgeable and more embarrassed than female pharmacists in discussing women's health issues (B3).

Analysis / discussion point:

The 'grey' literature confirms there is a desire by the public for easy access to information on both contraception and safer sex (an important finding in its own right set against a backdrop of increasing rates of infection in certain sexually transmitted infections and HIV/AIDS) and that they would be prepared to receive this advice from pharmacists. In comparison, the extent to which pharmacists can offer advice appears to be limited by their training (in particular, how comfortable they feel talking about sexual health issues) and their willingness to respond to enquiries. Health service commissioners need to consider

Two studies explored the community pharmacist's role in sexual health issues including safer sex and contraception (B3: Campbell Keegan 1992, p67; B3: Hughes 2000, p68). Although 86% of pharmacists thought that pharmacists had an important role in promoting safer sex and contraception, almost three-quarters reported being asked for advice on contraception less than once a week. The researchers noted that pharmacists generally took a reactive role, providing advice when asked (B3: Campbell Keegan 1992, p67). Public interest in the availability of advice from pharmacists was high, with 64% agreeing that they would like more advice from the pharmacist on contraception and safer sex (B3: Campbell Keegan 1992, p67). In Hughes' (2002) study, involvement in sexual health promotion was found to be limited and to occur entirely as a result of customer queries. Many of the community pharmacists who took part felt uncomfortable with this area of advice.

Community pharmacists' knowledge of and attitudes towards women's health were investigated in a study of pharmacists and users (B3: McAree 2001, p69). Pharmacists, completing a postal questionnaire, reported that they were not embarrassed to discuss many sexual health issues although some concerns were expressed about confidence and knowledge deficits. Male pharmacists perceived themselves as less knowledgeable and more embarrassed than did females. Users identified factors that might influence their decision about whether to use a community pharmacy including quality and confidentiality.

Emergency hormonal contraception

Relevant findings from peer-reviewed literature:

- Emergency contraception can be effectively and appropriately supplied by pharmacists (B3).
- Pharmacists were positive about their experience of providing emergency hormonal contraception (EHC) (B3).
- Users were satisfied with the service pharmacists provided (C1).

how pharmacies might play a greater part in national and local sexual health strategies and also in reducing teenage pregnancy rates. Pharmacists' access to up-to-date postgraduate training that incorporates and encourages networking with other local service providers is likely to be crucial in increasing pharmacists' confidence in dealing with these issues appropriately and effectively.

Key findings from non peer-reviewed literature:

- Pharmacy supply of EHC enables most women to receive EHC within 24 hours of unprotected intercourse (B3).
- Community pharmacies are highly rated by women as a source of supply and associated advice for EHC on prescription, by Patient Group Directions or over the counter sale (B3).
- A small minority (10%) of women choose pharmacy supply of EHC in order to maintain anonymity (B3).
- Pharmacists report predominantly positive experiences of involvement in supply of EHC through Patient Group Direction and over the counter (B3).
- Pharmacists wish their services for supply of EHC to develop in order to meet women's needs at a local level, particularly through increased use of Patient Group Directions to supply under-16-year olds (B3).
- The role of other pharmacy staff in provision of EHC services is reported by pharmacists to be important but there are no data to enable assessment of their contribution (B3).

Six studies on emergency hormonal contraception (EHC) were identified, three explored consumer perspectives and experiences, two focused on community pharmacists and one included both. Three surveys investigated the experiences of consumer and community pharmacists one year after EHC became available over the counter (B3: Lambeth, Southwark and Lewisham Health Action Zone 2002, p69; C1: Pharmacy Alliance 2002a, p70; B3: Pharmacy Alliance 2002b, p71).

Pre-deregulation

Two focus group studies on EHC, one with 14 community pharmacists (B3: Seston, 2000, p72), the other with 10 groups of users (B3: Edwards, 2000, p72) were reviewed. Both were conducted prior to the deregulation of EHC from prescription only to pharmacy medicine status. Pharmacists accorded EHC a special status in comparison

to other POM to P (prescription only medicine to pharmacy medicine) switches and supported mandatory training. Users were positive about the POM to P switch increasing accessibility and convenience. The consumer study identified the questions that women had about safety and effectiveness of EHC together with 'myths' about how often EHC could be taken and its effect on future fertility. Another study explored the attitudes of community pharmacists to pharmacy supply of EHC as part of wider research on the role of pharmacists in contraception and sexual health advice (B3: Hughes 2000, p68). Community pharmacists saw more scope for involvement in EHC supply than in other aspects of contraception. Pharmacists' reasons for support for EHC supply included a perceived increase in their status as well as a business opportunity.

A study of consumer and pharmacist perspectives on supply of EHC in the first Patient Group Direction scheme in Manchester included a questionnaire and focus groups with scheme users, interviews with pharmacists and 'mystery shopper' visits to pharmacies (C1: Anderson *et al* 2001, p70). The scheme was highly-rated by users, who valued the enhanced access to treatment. Most (85%) were content with the level of privacy available. Similarly most were satisfied with perceived confidentiality of the consultation, although those under 19 years of age expressed more concerns about this aspect. Some scheme users had found difficulty in identifying which pharmacies provided the service and when they were open, indicating a need for more effective publicity. Pharmacists were generally positive about their involvement, viewing the scheme as valuable both to its users and to the profession of pharmacy. Some pharmacists expressed concerns about the increased workload generated by the scheme and about different remuneration policies of pharmacist employers.

Post-deregulation

User views

Women purchasing EHC, receiving it on prescription or through a Patient Group Direction were asked to

complete a questionnaire by the pharmacist one year after EHC was deregulated to a pharmacy medicine (C1: Pharmacy Alliance 2002a, p70). From 250 pharmacies that participated in the survey, 785 women (30%) returned completed questionnaires. The results showed that just over half of the EHC was supplied as an NHS medicine, either as a prescription (42.4%) or under a Patient Group Direction (13.6%), compared to 44% purchasing EHC over the counter. Almost three-quarters (71%) of the women accessed EHC within 24 hours after unprotected intercourse, an important consideration as the efficacy of EHC is time-dependent, being most effective if taken within 24 hours after intercourse. There was a high level of satisfaction with the amount of advice and information received from the pharmacist. Pharmacies were highly rated as a suitable place to obtain and discuss EHC. Approximately one in ten women cited anonymity as a key reason for pharmacy purchase of EHC.

Women who had accessed EHC through a community pharmacy Patient Group Direction scheme in one area of London were surveyed as part of the evaluation of the programme (B3: Lambeth, Southwark and Lewisham Health Action Zone 2002, p69). In total 315 (20%) women returned the survey questionnaire, which was distributed through pharmacies participating in the scheme. Overall 98% of user respondents were 'Satisfied' or 'Very satisfied' with the service. The majority (90%) had felt 'Comfortable' or 'Very comfortable' discussing their request with the pharmacist. Overall one-quarter of respondents had concerns about confidentiality with the proportion being higher in women under 20 years of age.

Pharmacist views

In a national survey of community pharmacists' experience of selling and supplying EHC 1426 (64%) responded, of which 94% worked regularly in the pharmacy from which the survey was completed (B3: Pharmacy Alliance 2002b, p71). Almost all pharmacists (98.9%) said they would supply EHC on prescription and 89.4% said they would sell it over the counter. Overall 20% of respondents were already participating in a

scheme to provide EHC through a Patient Group Direction and a further 51% said they would be willing to do so. These figures show a high level of commitment from pharmacists to the supply of EHC and demonstrate scope for extending Patient Group Direction supply.

The survey report was able to compare pharmacists' responses with those from a previous questionnaire in 1997. In the current survey pharmacists disagreed that over the counter availability had resulted in increased promiscuity or sexual activity, a concern that significant numbers had expressed in 1997. In addition, pharmacists did not agree that they had found it difficult to deal with teenagers' requests for EHC, allaying another concern expressed in 1997. These findings demonstrate that practical experience of supplying EHC over the counter showed previous concerns to be unfounded. Instead pharmacists felt that over the counter availability of EHC had provided an opportunity to develop new counselling skills and 91% reported undertaking training to prepare for their new role with EHC.

The survey also asked about pharmacists' views on supplying EHC to those under 16 years of age. While respondents were not in favour of supplying EHC to under-16s as an over the counter medicine, they did not agree that all under-16s requesting EHC from the pharmacy should be referred elsewhere. These findings suggest that pharmacists wish to use their professional judgement when supplying EHC and this is further confirmed by their support for the supply of EHC via Patient Group Direction to females aged under 16 years. However, of the 284 pharmacists involved in Patient Group Direction schemes, 66% (136) reported that under-16s were excluded from their local scheme. In addition, respondents agreed that the price of over the counter EHC was a deterrent to women purchasing it. Overall the findings suggest that pharmacists believe that improved access to EHC is needed for some women through NHS supply under Patient Group Direction. The survey showed that pharmacists are actively referring women for whom over the counter EHC is inappropriate to GPs (90%) and

family planning clinics (60%). Pharmacists reported receiving little feedback about either positive or negative experiences with EHC.

Pharmacists supplying EHC through a community pharmacy Patient Group Direction scheme in one area of London were surveyed as part of the evaluation of the programme (B3: Lambeth, Southwark and Lewisham Health Action Zone 2002, p69). The pharmacists identified the important role of counter staff in managing waiting customers. They reported increased professional self-esteem as a result of taking part in the Patient Group Direction scheme.

Immunisation

Relevant findings from peer-reviewed literature:

- Pharmacy patient medication records can be used for case-finding of 'at risk' clients to be invited for immunisation and can increase the percentage of the target group immunised (B3).

Key findings from non peer-reviewed literature:

- Pharmacy patient medication records are effective in identifying and flagging 'at risk' patients to prompt and enable pharmacist intervention for immunisation (B3).

A feasibility study was conducted of identification of 'at risk' patients for influenza immunisation through community pharmacies (B3: Williams *et al* 1993, p73). A systematic method using pharmacy patient medication records was effectively used to identify such patients. A questionnaire given to those patients identified showed that a significant percentage had not previously had influenza immunisation. In comparison, an opportunistic method based on the presentation of influenza-like symptoms and purchases of relevant over the counter medicines was less effective. The response from pharmacists using the opportunistic method was low and feedback suggested this was due to lack of remuneration.

Analysis / discussion point:

The findings from the non peer-reviewed literature demonstrate the high level of user and pharmacist acceptability of the pharmacy supply of EHC and also the effectiveness of increased access within the time-sensitive period (72 hours). There is an expressed wish from pharmacists to be supplying more EHC under Patient Group Direction, particularly to those under 16 years of age and for women who find the cost of over the counter supply prohibitive. In addition, pharmacy supply of EHC under Patient Group Direction would be likely to lead to pharmacy-based services becoming more integrated with other local services and could potentially increase referrals between major service providers. Further monitoring is needed into the use of, and outcomes of, pharmacy supply of EHC under Patient Group Direction.

Analysis / discussion point:

The literature demonstrates the potential effectiveness of systematically using pharmacy patient medication records to identify high risk individuals for immunisation. It is recommended that piloting of this system should begin as soon as possible in the UK.

Head lice

Relevant findings from peer-reviewed literature:

none relevant.

Key findings from non peer-reviewed literature:

- Pharmacists and health professionals appear positive about the service and express a wish for it to continue (B3).
- The majority of head lice management programmes require proof of infestation before treatment is supplied and between one-quarter and one-third of consultations result in no treatment being recommended (B3).
- Where treatment is supplied, community pharmacists' adherence to the local formulary appears to be extremely high (approaching 100%) (B3).
- User feedback shows that head lice management services are generally well-received, but between 18% and 34% of scheme users report having some concerns about privacy in the pharmacy during the consultation (B3).
- Work is needed locally to ensure messages about treatment of head lice infestation are consistent between pharmacists, GPs, practice staff and schools (B3).
- There is some evidence that the cost of over the counter head lice treatments is a barrier to appropriate use. Community pharmacy supply of treatment on the NHS should be explored in areas where this applies (C1).

Two reports evaluating community pharmacy provision of head lice management were reviewed (B3: Philips *et al* 1999, p73; B3: National Pharmaceutical Association 2001, p74). A total of 5710 users accessed a scheme involving 32 community pharmacies in three Primary Care Groups in the three-month evaluation period (B3: Philips *et al* 1999, p73). Most consultations were on behalf of children (76.8%) and were by females (67.4%). Almost all (94%)

of scheme users were exempt from prescription charges. Proof of infestation was required before treatment was supplied and no treatment was recommended in one-third of consultations. Where treatment was supplied by the pharmacist it conformed to the local formulary on 99% of occasions. The scheme was well received by users, although 18% reported feeling embarrassed to discuss head lice with the pharmacist. GPs and school nurses rated the scheme highly.

A total of 1847 clients accessed a community pharmacy-based head lice management scheme covering two Primary Care Groups and 32 pharmacies (later extended to 47) in Sunderland during a seven-month period (B3: National Pharmaceutical Association 2001, p74). Proof of infestation was required for treatment and was shown in 77% of consultations, avoiding the use of chemical insecticides in 415 cases. The scheme was well received by users and was rated 'good' or better by 82% of users. Roughly one-third said they were not able to have a private discussion in the pharmacy. Three-quarters of users said they intended to use regularly the head lice comb they had been given as part of the scheme. Almost three-quarters of GPs reported that the service had reduced the amount of time they spent dealing with head lice infestation. Roughly one-third of GPs reported they 'rarely' (31%) or never (3%) saw the client when prescribing head lice treatment. Over 90% of health professionals wanted the service to continue and 66% of GPs wanted it to be extended to cover other conditions. Pharmacists reported that 67% of initial consultations took between 5 and 10 minutes and 93% said they would be happy to continue the service.

Communication to enable consistency of information about head lice treatment was studied in a survey of community pharmacists, head teachers of primary schools, school nurses and GPs in one locality (B3: Thomas 2000, p75). The response rates for different groups ranged from 65–90%. Schools were found to provide information to parents that was sometimes out of date and/or at odds with that being given by health professionals. Some of the survey groups had different

preferences for treatment types, suggesting that recommendations would be likely to differ. Thomas concluded that there was considerable potential for parents to be presented with conflicting and confusing information and identified a need to develop a consistent approach.

In a community pharmacy-based study, staff in 34 pharmacies recorded details of requests for head lice products on prescription and over the counter (C1: McGovern 2001 p75). Among 184 customers who completed a questionnaire, 69% said they intended to repeat the treatment application and 38% said they intended to treat the whole family or all children regardless of whether head lice were found. Quantities prescribed and purchased were lower than those recommended in relevant guidelines. These findings raise concerns that head lice treatments may not be optimally used, with risks of treatment failure and the development of resistance.

Oral health

Relevant findings from peer-reviewed literature:

- Pharmacists are asked by their customers to give advice on oral health but training received on this topic is variable and evidence of their interventions is lacking (B3).

Key findings from non peer-reviewed literature:

- Opportunities for pharmacists to recommend sugar-free medicines for children are limited as most requests from customers are for a named medicine (C1).
- Training and participation in oral health promotion activities appear to increase pharmacists' intent to try to change users' behaviour (C1).
- Most pharmacy customers say they believe sugar-free medicines are important for children (C1).
- A more proactive approach by pharmacists is required to maximise opportunities for oral health development (C1).

Analysis / discussion point:

The use of community pharmacy-based services to treat head lice infestations appears to be well-received by users and other health professionals, although concerns about privacy are expressed by a significant minority of users. The finding that no treatment was provided in one-third of cases indicates that pharmacists followed the protocol requirement for examination and proof of infection. No evidence of effectiveness of treatment, or prevention of infestation or re-infestation were reported in the studies reviewed. Further research to assess the effectiveness and cost-effectiveness of these pharmacy-based interventions is required together with the need for local planning and co-ordination of treatment services and messages.

In a study of community pharmacists' attitudes and practice relating to sugar-free medicines, baseline interviews were followed by a pharmacy-based health promotion campaign on this topic together with educational events (C1: McGovern *et al* 1999, p76). On re-interview, pharmacists' attitudes towards sugar-free (SF) medicines were more positive. Many pharmacists reported taking part in the health promotion campaign, participating in postgraduate education on oral health or reading relevant articles.

Data collection in the same study on sales of over the counter paediatric medicines showed that most requests were made for a named medicine and the pharmacist's recommendation was sought in around 15% of cases. The percentage of pharmacists indicating they would attempt to persuade a purchaser of a sugar-containing medicine to switch to a SF product had increased in the follow-up interviews. The authors noted that improvements had occurred due to the educational and campaign activities. They concluded that further improvements could be made and that greater proactivity by pharmacists would be needed (C1: McGovern *et al* 2000, p76).

Mental health

Relevant findings from peer-reviewed literature:
none relevant.

Key findings from non peer-reviewed literature:

- Community pharmacies are used for the purchase of products to reduce stress and anxiety (C1).
- Most (87%) pharmacy users did not regard pharmacists as their preferred source of advice on stress and anxiety (C1).
- Around half of pharmacy staff were aware of relevant local self-help groups (C1).
- Pharmacy users take up leaflets on topics relating to stress and anxiety, with leaflets on sleep problems and relaxation being most commonly selected (C1).

Analysis / discussion point:

There appears to be some potential for community pharmacy staff to be further involved in the provision of services to promote oral health. Some limitations on this role, however, appear to be linked to pharmacy user requests for a specific named medicine that potentially presents a conflict of interest between the pharmacist's role as a health professional versus their business interests. This is an issue that needs to be addressed locally through training and remuneration of services. Indeed, pharmacists in the study reviewed seemed to be persuaded by training to try to encourage customers to purchase a SF alternative.

Analysis / discussion point:

Although a highly-sensitive topic, there appears to be potential for pharmacy staff to offer support and advice in relation to mental health issues. At present the majority of pharmacy-based support appears to be linked to medicine sales. Pharmacy users, however, are also looking for more information and additional sources of help as exemplified by leaflet uptake. In addition, some staff have knowledge of relevant local services but it is not clear whether this information is easily accessible to pharmacy users. As pharmacists already provide and successfully offer help on other

The involvement of pharmacy staff in the management of stress and anxiety was the subject of a pilot study in one locality (C1: Reilly *et al* 2001, p77). A training evening was held, and a resource manual was produced and distributed to all pharmacies. Pharmacy customers were asked to complete a questionnaire on frequency of symptoms, any treatments purchased and preferred sources of advice; 150 did so (90% response rate). The GP was the preferred source of advice on stress and anxiety (76%), with friends (36%) and the pharmacist (13%) next. However, 33% of respondents reported that they had purchased a remedy to help their symptoms, indicating opportunities for pharmacy staff to intervene (but interventions, other than the sale of a product, were not recorded). Just over half of the 24 pharmacy staff interviewed were aware of local self-help groups and might have been able to refer to them (although the study did not record whether they intervened or not). Leaflet uptake during the study ranged from 41 to 155 per pharmacy with the most popular topics being sleep and relaxation guides.

Prevention of transmission of infection

Relevant findings from peer-reviewed literature:
none relevant.

Key findings from non peer-reviewed literature:

- Pharmacists generally have positive attitudes towards involvement in prevention of transmission of infection (B3).
- Pharmacists knowledge about transmission of HIV, hepatitis B and hepatitis C is variable (B3).

A survey of community pharmacists found positive attitudes towards involvement in activities and services to prevent transmission of HIV and hepatitis B and C (B3: Watson *et al* 2002, p77). Pharmacists' knowledge about blood-borne diseases was found to be variable. The main

sensitive issues (e.g. emergency hormonal contraception and head lice management) it is feasible that support could be extended to mental health issues, however, the common barriers to receiving advice on sensitive topics (especially privacy and confidentiality) would need to be addressed before further publicising these services. In addition, pharmacy-based services should be integrated into other relevant local services, further training provided and outcomes monitored.

Analysis / discussion point:

Pharmacists potentially have a significant role to play in preventing and reducing the transmission of infections (see also sections on Sexual health and Immunisation), however, current evidence suggests their involvement is mainly limited to opportunistic travel health advice (see for example, Report 4).¹ The main barriers to their increased involvement are similar to those cited for health development activities in general, in particular a lack of time, remuneration and of a private area for consultation, however the importance of the topic concerned and its implications for public health are such that further exploration and research into their potential role is urgently required.

¹ Local Pharmacy Health Development Projects – Testing Models of Implementation in Community Pharmacy (2002). Unpublished work available on request from pharmacyhealthlink@rpsgb.org.uk or 020 7572 2265.

barriers to extended involvement were perceived by the pharmacists to be time, availability of a private area and lack of remuneration.

Accidental injury prevention

Falls prevention

Relevant findings from peer-reviewed literature:

none relevant.

Key findings from non peer-reviewed literature:

- A pharmacy-based osteoporosis screening service involving pharmacist and nurse input was found to be feasible and identified women at risk of osteoporosis (B3).
- Women using the scheme valued the accessibility offered by community pharmacy (B3).

One report of a community pharmacy-based osteoporosis screening service was reviewed (B3: Martin-Hamblin-GfK 2002, p78). The study was a small scale pilot in one pharmacy, where 228 women completed a risk assessment questionnaire. Of these, 49 were found to be low risk and the remaining 179 had a bone scan conducted by a nurse in the pharmacy, from which 36 were found to be osteoporotic and were referred to the GP for treatment. Most users (78%) were either invited to take part by pharmacy staff or self-referred after seeing a project poster in the pharmacy. While three-quarters rated the pharmacy as a more convenient location than their doctor's surgery this did not necessarily translate into intended future service use. Just over half the women said the convenience of the pharmacy would make them more likely to use the service, suggesting that other factors played an important part. Most users rated pharmacy staff as very/extremely accessible (90%) and professional (83%). The nurse's input was also highly valued, with over 90% rating as very/extremely knowledgeable and as giving very/extremely clear explanations.

Medicines-related injuries

Relevant findings from peer-reviewed literature:

none relevant.

Key findings from non peer-reviewed literature:

- Requests to patients to return unused medicines to the pharmacy result in large quantities of excess medicines being identified (C1).
- Changes in therapy, the death of patients and adverse effects are important reasons why excess quantities of medicines occur in people's homes (C1).
- Discussions between local health professionals appear to be useful in making changes to prescribing frequency to prevent the accumulation of excess medicines (C1).

A study in which data were collected on unwanted medicines returned to community pharmacies showed that the main reasons for return were a change in therapy, the death of the patient and adverse reactions (C1: McGovern *et al* 2001, p78). The most commonly returned medicines were for treating cardiovascular conditions. The authors note that there was some evidence of excessive prescribing. The results of the study were subsequently discussed locally and changes in the frequency of prescribing were agreed.

Factors affecting the effectiveness of community pharmacy health development activity

Training²

Relevant findings from peer-reviewed literature:

- Community pharmacists trained in behaviour change methods are effective in helping clients stop smoking (B1).
- Training in smoking cessation techniques increases

² See sections on Pharmacists (p44), Smoking cessation (p17), drug misuse (p19) and oral health (p29) for more details of studies reviewed.

Analysis / discussion point:

Pharmacists and their staff have a substantial amount of contact with older people (who often have a high medicines intake) and people who require repeat dispensing during the normal course of their work (see section on Public use of community pharmacies, p41). This places them in a good position to be able to identify where the use of medicines may be predisposing the user, or carer, to accidents in the home or elsewhere. The review of medicines for high or frequent users (as required by national and local policies) presents an ideal opportunity for the pharmacist to initiate a discussion with the user or carer to identify potential risk factors and help determine solutions to minimise these risks. Further research into the pharmacists' role in preventing accidents in other target groups, for example children and young people, is also warranted.

pharmacists' effectiveness in achieving higher quit rates (B1).

- Training in skin cancer prevention enhances knowledge and increases the opportunistic offering of advice to clients by pharmacists (B1).
- Training increases the length of consultation between pharmacist and clients on health issues (B2).
- Training in health improvement increases the time that community pharmacists spend in consultation with pharmacy users and also increases user satisfaction (B3).
- Specific training needs have been identified for pharmacists participating in pharmacy-based needle-exchange schemes (C1).

Key findings of non peer-reviewed literature:

- Training has positive effects on the consultation and information-giving behaviour of community pharmacy staff (B1).
- Training increases knowledge, self-confidence and positive attitudes of pharmacists and their staff in relation to smoking cessation (B1).
- Postgraduate training produces positive changes in both attitudes and behaviour of community pharmacists in relation to health improvement activities (B3).
- Training for pharmacists needs to include skills in translating technical terms into a suitable language for drug misusers (C1).
- Training and participation in oral health promotion activities appear to increase pharmacists' intent to try to change users' behaviour (C1).

Use of pharmacy patient medication records³

Relevant findings from peer-reviewed literature:

- Using pharmacy patient medication records to

Analysis / discussion point:

The research evidence identifies the effectiveness of training in changing pharmacists' practice behaviours. Training also affects pharmacists' confidence and attitudes and there is evidence that pharmacists who have undergone training will have increased involvement in health improvement activities. It is therefore key to the successful implementation of community pharmacy-based health improvement programmes.

³ See section on Immunisation (p26) for details of studies reviewed.

identify clients at 'high risk' of coronary heart disease is an effective method of identifying those most at risk and instigating health promotion measures (B1).

- Pharmacy patient medication records can be used for case-finding of 'at risk' clients to be invited for immunisation and can increase the percentage of the target group immunised (B3).
- Information routinely kept by community pharmacies on dispensed medication enables case-finding of patients for interventions in lipid management (C1).

Key findings from non peer-reviewed literature:

- Pharmacy patient medication records are effective in identifying and flagging 'at risk' patients to prompt and enable pharmacist intervention for immunisation (B3).

Design and use of pharmacy premises

Privacy,⁴ anonymity⁵ and confidentiality⁶

Relevant findings from peer-reviewed literature:

- Most pharmacy users perceive there is sufficient privacy in the pharmacy to discuss even sensitive subjects (B2).

Key findings from non peer-reviewed literature:

- Community pharmacists and users appear to have different perceptions of what constitutes acceptable facilities to maintain privacy (B3).
- Pharmacy users' perceived concerns about privacy are generally not borne out in their reports of actual experience (B3).
- Most users of potentially sensitive pharmacy services (e.g. emergency hormonal contraception; head lice management) report adequate facilities for privacy in

4 In this report the definition of 'privacy' used is: 'Being able, or having the facilities, to hold a private discussion in the pharmacy at a convenient time for the client without being overheard.'

5 In this report the definition of 'anonymity' used is: 'Where the client uses the pharmacy for advice or services with the explicit intention of remaining unidentified and/or untraceable.'

6 Pharmacists have a professional duty of confidentiality to all their clients, including not releasing information gained from a consultation to the client's doctor without the client's express permission.

Analysis / discussion point:

Research findings show the potential of community pharmacy patient medication records to identify and target specific groups of patients. Primary care organisations need to consider how this potential can be harnessed to contribute to achieving local health targets.

community pharmacy with a consistently sizeable (up to 20%) minority expressing concern (B3).

- A sizeable minority (up to 20%) of women obtaining emergency hormonal contraception from community pharmacies reported having concerns about confidentiality and this was higher among those under 19 years of age (B3).

User views

The results of a self-completion questionnaire study of users suggests that the public may have a different view of what constitutes appropriate facilities to enable private discussions. The researchers found that 'two-thirds of the respondents would like to be able to talk to the pharmacist in private, while only 5% had found and used such facilities to date' (B3: Aston University/MEL Research 1991, p79).

In her study of the health information needs of people buying aspirin for heart disease prevention, or receiving it on prescription, Kinghorn concluded that 'pharmacy premises were considered by some to lack privacy' (C1: Kinghorn 1998, p65).

The most important factor for users considering a pharmacist for advice in a study on contraception and safer sex was the availability of a quiet area, cited by 41% of the 224 respondents (B3: Campbell Keegan 1992, p67). Quality and confidentiality of pharmacists' advice were identified by users as influencing possible use of a community pharmacy advisory service on women's health (B3: McAree 2001, p69).

In a large interview study with pharmacy users, one-third said they would be willing to ask about a sensitive or personal problem in the pharmacy. Around two-thirds said there was insufficient privacy to discuss a sensitive problem in the pharmacy and only 18% believed that privacy was adequate. Women were significantly more likely than men to say that they would discuss a sensitive problem with the pharmacist (C1: Coggans *et al* 2000, p79).

A study of user attitudes towards community pharmacy supply of emergency hormonal contraception (EHC) prior to deregulation from POM to P (prescription only medicine to pharmacy medicine), or supply on Patient Group Direction, involved 10 focus groups with women who had used, or might use, EHC (B3: Edwards 2000, p72). While women were positive about pharmacy supply of EHC, the open pharmacy environment was a 'major concern'. The same study also found that participants were concerned about confidentiality in the community pharmacy setting and about what records would be kept of the supply. It is not possible to tell from the findings the distribution of these concerns between women who were expressing their perceptions and those who had used EHC. However, when pharmacy users are asked about their actual experience rather than perceptions the results are quite different as the results of consumer studies conducted prior to and since wider access through pharmacies to EHC demonstrate.

In a study of women who had all obtained EHC from pharmacies by Patient Group Direction, most were satisfied with the level of available privacy, although approximately one in five felt there was insufficient privacy for their discussion with the pharmacist (B3: Lambeth, Southwark and Lewisham Health Action Zone 2002, p69).

In a national survey of womens' experience of obtaining EHC through community pharmacies, the setting was highly rated as a suitable place to obtain and discuss EHC by women receiving it on prescription, Patient Group Direction or through over the counter purchase (B3: Pharmacy Alliance 2002*b*, p71).

These findings suggest that many women find it acceptable to discuss this sensitive subject in a community pharmacy. The same study found that most women did not have concerns about confidentiality and pharmacy supply, although roughly one-quarter of women did.

Most (80%) women using a community pharmacy-based osteoporosis screening service felt they were treated with 'complete' privacy and confidentiality, with 18% reporting a 'degree of privacy' and 2% giving a negative rating (B3: Martin-Hamblin-GfK 2002, p78).

Just over two-thirds (68%) of the 600 pharmacy customers interviewed in a Scottish study believed their discussions in the pharmacy would be confidential. Women were significantly more likely than men to say that confidentiality would be maintained (C1: Coggans *et al* 2000, p79).

Two reports of community pharmacy-based head lice management schemes included an assessment of users' perceptions of privacy. In the first study, 17.6% of 336 users reported being embarrassed to speak to the pharmacist about head lice (B3: Philips *et al* 1999, p73). In the second study, 42% of users agreed that they were able to discuss their problem in private, 34% said they were not able to do this and 24% were 'not bothered' about this aspect (B3: National Pharmaceutical Association 2001, p74).

Pharmacist views

The availability of a 'quiet area' in the community pharmacy to provide a setting for private discussion was explored in several studies. In a large survey in the late 1980s, 62% of community pharmacist respondents reported that their premises had a suitable area or room for private discussion and one in four pharmacies reported having a 'consultation room' (B3: Shafford & Sharpe 1989, p80).

Methods of provision of health information

Use of leaflets

Relevant findings from peer-reviewed literature:

- Awareness of pharmacy-based leaflets on health topics is higher for those clients taking prescribed medicines (B3).

Analysis / discussion point:

Feedback from pharmacy users demonstrates that pharmacy-based EHC and head lice management services are highly rated. However, although most users report finding the level of privacy in pharmacies acceptable, a significant minority do not. In addition, around one in five women receiving EHC were unsure whether the information would be kept confidential. These findings suggest that although community pharmacists can play a valuable role in providing these services and believe they currently have adequate facilities to do so, there is a need to be aware that a significant minority of the public still report concerns over privacy and confidentiality. Suggested action to address these issues would include reviewing the facilities available for private discussion in community pharmacies and greater publicity about the terms and conditions for confidentiality that apply to pharmacists and their staff.

Key findings from non peer-reviewed literature:

- Community pharmacists consider leaflets to be an important component of their health improvement toolkit (B3).
- Passive displays of leaflets may be missed by half of pharmacy customers (C1).

The display and use of health promotion leaflets was included in several studies. In Shafford and Sharpes' large survey of community pharmacists 56% of respondents believed leaflets to be of 'great' or 'very great' importance and 45% reported displaying them (B3: Shafford & Sharpe 1989, p80). The findings of that study suggested that pharmacists gave a higher priority to displaying leaflets than to providing advice on health education, indicating a preference for passive rather than active involvement. However, as passive displays of leaflets were found to be missed by nearly half of pharmacy customers (B3: Aston University/MEL 1991, p79), leaflet-based strategies are best viewed as supportive of medicines or health advice, or through offering an opportunity for further discussion, rather than an end in themselves.

Multimedia technology

Relevant findings from peer-reviewed literature:

none relevant.

Key findings of non peer-reviewed literature:

- Multimedia technology may be a means of engaging young and healthy pharmacy customers in health improvement activities (C1).

A small experimental descriptive study assessed the usage of a multimedia touch screen kiosk in the community pharmacy setting (C1: Hariri 1998, p81). Over 12,400 people used the kiosk in six pharmacies. Usage was much higher in supermarket pharmacies compared with others, however, the completion rate for the software used was similar in the two groups at 31% and 37%. Most users were relatively young (under 40 years) and data collected

on Body Mass Index (BMI) showed the majority to have a 'healthy' figure of 25 or less. Observation studies showed that older customers needed encouragement and a demonstration by the pharmacist before they used the kiosk. These results suggest that younger and healthier pharmacy customers are more willing and likely to use computer-based information points. The low completion rate suggests that further work is needed to develop programmes with which this younger group will engage more fully. The lower technology familiarity of older pharmacy customers and their high frequency of use of pharmacies also needs to be taken into account in designing future strategies.

Stakeholder views

Pharmacy users

Relevant findings from peer-reviewed literature:

- User feedback from pharmacy-based health improvement activities is generally very positive (B3).
- Users' awareness of community pharmacies as a source of general health advice is low (B3).
- Pharmacy users report having followed the health advice given by pharmacists with positive views on the pharmacist's input (B3).
- Most users perceive there is sufficient privacy in the pharmacy to discuss even sensitive subjects (B3).
- Community pharmacy-based supervised methadone administration services can achieve high attendance rates and be acceptable to clients (B3).
- User satisfaction with pharmacy-based immunisation services is high (C1).
- Users were generally satisfied with the emergency contraception service pharmacists provided (C1).

Analysis / discussion point:

The means of provision of health information to patients is rapidly developing with the introduction of new technologies, for example, portable touch-screen kiosks, and the public's increasing access to electronic information through the Internet. These technologies are also being applied to the NHS with the introduction and increasing use of telephone advice-lines (e.g. NHS Direct in England) and NHS advice and services via the Internet (e.g. NHS Direct On-Line). Pharmacists need to consider what are the most appropriate ways of ensuring their users have access to the information they need. This can take a variety of forms, such as written information, provided as leaflets or electronically. At the time of writing there was not sufficient evidence to suggest that one particular form was more effective than another. Instead it appears that different methods of receiving health information depend on individual user preferences and characteristics. When a pharmacist, or staff member, actively engages with a client about their health needs it is possible to determine what method of information provision might suit them best. At other times, neither pharmacy users nor the pharmacist may be able, or willing, to engage in further consultation and at these times the provision of easily accessible written, or electronic, health information should be available to those who require it.

Key findings from non peer-reviewed literature:

- Public use of community pharmacies is almost universal but is low for general health advice (B3).
- Community pharmacists are perceived as drugs experts rather than experts on health and illness (B3).
- Community pharmacies are highly rated by users as a source of supply and advice for emergency hormonal contraception and head lice management (B3).
- The actual experience of service users appears to be more positive than their perceptions of access to and value of advice and services from community pharmacies (B3).

The public's use of community pharmacies

Public use of community pharmacies is high, with 94% of respondents in a large (517 adults) interview-based survey having used a pharmacy in the previous year for one of three core reasons: obtaining prescription medicines; 'over the counter' medicines purchase; healthy lifestyles related advice (B3: BMRB 1996, p81). The ACORN (A Classification of Residential Neighbourhoods) classification was used in sampling.⁷ Reported use was for prescriptions (90% of respondents), over the counter medicines (30%) and seeking general health advice (10%). Use for general health advice was higher among women, respondents with young children and those from lower socio-economic groups. Respondents in the 'striving' ACORN group live in the poorest conditions and correspond well with those in the 'inner city' group who are the most frequent users of pharmacies. Overall 14% of respondents reported receiving unsolicited health advice from pharmacies. See Table 4.

⁷ See <http://www.caci.co.uk/pdfs/acorn2001.pdf> for more information on the ACORN classification.

Table 4. Use of community pharmacies by ACORN (A Classification of Residential Neighbourhoods) categories

Usage at least one every	Thriving	Expanding	Rising	Settling	Aspiring	Striving
Week to every 4 weeks	48%	35%	47%	53%	46%	57%
2 months to once within last year	52%	65%	53%	47%	54%	43%
Average number of times per year	12	10	12	12	12	14

The categories represent a decreasing socio-economic gradient from left to right, where 'thriving' is more affluent and 'striving' is deprived.

A health diary study of health status and use of health resources in primary care among 834 residents in 346 households found that frequency of pharmacy use was high and mainly restricted to the prescription service (B3: Hassell *et al* 1998, p82). Most people self-managed minor conditions, with 5.5% using the community pharmacy for advice. Interviews with a sub-sample of 41 diary respondents found that community pharmacists were perceived as 'a drug expert – advising on medicines not illness'.

Pro forma diaries completed by community pharmacists showed that only 3% of recorded enquiries were about general health (B3: Shafford & Sharpe 1989, p80). It was noteworthy that enquiries about general health took longer to deal with than did those about prescribed medicines or symptoms and also that they tended to be made during busy dispensing periods.

Public perceptions of the pharmacist's role in giving health advice

Most pharmacy users in an interview survey with 592 customers in six pharmacies participating in the Barnet High Street Health Scheme believed that the doctor was the best and most convenient person to go to for advice about staying healthy (B3: Anderson 1997, p82).

Although 40% of users believed that it was the 'usual

job' of the pharmacist to advise on staying healthy, only 15% had ever asked for such advice.

Interviews with 600 customers in 30 community pharmacies in Scotland showed a clear distinction in the proportion willing to seek advice on medicines-related and non medicines-related topics (Table 5). When asked why they were not willing to discuss healthy eating with the pharmacist, two-thirds said they already knew enough about it. However, 22% of respondents said either that they did not see this as part of the role of community pharmacy or that it had not occurred to them that pharmacies could provide such advice (C1: Coggans *et al* 2000, p79).

Table 5. Willingness of pharmacy customers to discuss health topics with the pharmacist (n = 600)

Health topic	Percentage of customers agreeing
Prescribed medicines	86
Minor health problems	84
Smoking cessation	66 ^a
Sensitive topics	33
Healthy eating	32
Exercise	20

Source: Coggans *et al* 2000.

^a*Of smokers prepared to contemplate quitting*

Over a quarter of the 224 respondents in a questionnaire survey to determine pharmacy users' views of health information leaflets in pharmacies reported difficulty in identifying the pharmacist and a similar proportion agreed that 'the pharmacist prefers to keep out of sight'. The researchers concluded that 'there are still many people who are unaware of the pharmacist's role as an adviser on general health matters' (B3: Aston University/MEL Research 1991, p79). None of the respondents in a survey of 224 users spontaneously suggested that they would go to the pharmacist for advice on contraception or safer sex (B3: Campbell Keegan 1992, p67).

Many of the 39 pharmacists interviewed in a qualitative study believed that the public 'did not recognise the extent of their training and skills and see them as

shopkeepers, not health educators' (B3: Anonymous 1993, p83). Pharmacists who participated in a large questionnaire study were reported to be 'keen for the public to be better educated about the role of the pharmacist in healthcare in general' (B3: BMRB 1993, p84).

Users' experience of advice and services in the pharmacy setting

Several studies were identified that obtained feedback from users about advice and services actually received, rather than their perceptions of, or attitudes to, receiving them.

Client feedback on the pharmacy supply of emergency hormonal contraception (EHC) was obtained in two studies. Women receiving EHC through a Patient Group Direction in South London showed a high level of satisfaction with the service (B3: Lambeth, Southwark and Lewisham Health Action Zone 2002, p69). A high level of satisfaction with community pharmacy supply of EHC was also found in a national survey of women receiving the treatment on prescription, Patient Group Direction or purchasing it over the counter (C1: Pharmacy Alliance 2002a, p70). Pharmacies were highly rated as a place to obtain and discuss EHC. A desire for anonymity was the reason why 9.7% of women surveyed had opted for over the counter purchase of EHC.

Users who received advice on women's health in a pilot study in four pharmacies were reported to respond positively (B3: McAree 2001, p69).

One study investigated the views of clients of pharmacy drug misuse services (B3: Sheridan 1995, p66). Clients perceived pharmacists as service providers but not as a source of advice. Some clients reported positive experiences of their interactions in pharmacies but others considered themselves to be stigmatised by community pharmacists.

Pharmacists

Relevant findings from peer-reviewed literature:

- Pharmacists attach a high degree of importance to health improvement activities (B3).

Analysis / discussion point:

Use of community pharmacies for general health advice tends to be low among the public but appears to be higher among women, respondents with young children and lower socio-economic groups. People living in areas of deprivation, high unemployment or in inner cities are more frequent users of community pharmacies.

Both the public and community pharmacists believe that the advice-giving role of community pharmacists on general health issues is not widely recognised or utilised. As service developments occur it may be necessary to run local campaigns to raise public awareness of services on offer and to target those who would benefit most from increased access, such as those living in areas of deprivation or inner cities. Further research is required to investigate the use of community pharmacies by lower socio-economic groups, particularly in relation to advice-giving as well as the supply of medicines.

- Pharmacists are more comfortable with health improvement activities that are related to medicines and need support to extend their portfolio of health-related work (B3).
- Pharmacists' advice is more likely to be reactive than proactive (B3).
- Pharmacists' concerns about being 'intrusive' in offering potentially unwelcome health advice predisposes to a reactive stance (B3).
- Pharmacists were positive about their experience of providing emergency hormonal contraception (B3).
- Pharmacy staff appear positive about promoting the role of folic acid in pregnancy but there is no evidence of the effects of intervention on behaviour (B3).
- Dispensing duties are widely reported as a key barrier to pharmacists' greater involvement in health improvement activities (B3).

Key findings from non peer-reviewed literature:

- Training has positive effects on the consultation and information-giving behaviour of community pharmacy staff (B1).
- Community pharmacists perceive health promotion activity as important but tend to spend little time on it in everyday practice (B3).
- Future roles in health improvement are largely perceived as medicines-related by community pharmacists (B3).
- Community pharmacists have concerns about the receptiveness of GPs and patients to a greater role in health improvement and thus proactivity is reduced (B3).
- Postgraduate training produces positive changes in both attitudes and behaviour of community pharmacists in relation to health improvement activities (B3).

Priorities for advice-giving

Several studies explored where health improvement featured in community pharmacists' priorities for advice-giving. When asked whether they believe that health promotion is important, most community pharmacists agree. In a postal survey only 13.5% of 1330 respondents rated health promotion as being of 'little' or 'no' importance (B3: Health Promotion Authority Wales 1991, p83). While pharmacists perceive health promotion to be important it was also noted that 'pharmacists' health promotion role is reactive not proactive' and that 'the pharmacist's role is very much oriented towards medical advice ... health promotion happens during this process (B3: Anonymous 1993, p83). However, the priority that pharmacists gave to health promotion in relation to other activities provides a different perspective. A survey of 897 community pharmacists (response rate 58%) found that respondents attached 'great importance' to advice-giving on prescribed medicines (52%); over the counter medicines (45%) and health education (18%) (B3: Shafford & Sharpe 1989, p80).

The amount of time spent by community pharmacists on health promotion activities was estimated as 5% in one study (B3: Anonymous 1993, p83) while around three-quarters of pharmacists estimated that they spent between one and three hours a week on such activities (B3: BMRB 1993, p84).

Most community pharmacists who participated in a study on contraception and sexual health saw their role as 'revolving around the provision and sale of medicines' (B3: Hughes 2000, p68). The most commonly mentioned areas for role development in the future in the same study were running clinics for diabetes and asthma, managing long-term medication, pharmacist prescribing and health promotion.

Provision of specific services

The numbers of pharmacies providing specific services were measured in a questionnaire survey of all community pharmacists in Wales (B3: Health Promotion

Authority Wales 1991, p83). The returns represented 522 pharmacy premises (response rate 67% of pharmacists) and the services provided are given in Table 6.

Table 6. Pharmacies in Wales providing specific services (n = 522)

Service Provided	Percentage
Pregnancy testing	59
Weight measurement	30
Sale of needles and syringes	29
Blood pressure measurement	15
Needle/syringe exchange	8
Cholesterol testing	0.3
Lung function testing	0.01

Source: Health Promotion Authority Wales 1991.

These figures provide a useful picture of activity at the start of the last decade and show that the majority of pharmacies were not providing any specific services related to health improvement with the exception of pregnancy testing.

Barriers to greater involvement

Two large postal surveys (B3: Health Promotion Authority Wales 1991, p83; B3: BMRB 1993, p84) provided quantitative data on community pharmacists' perceived barriers to extending their involvement in health improvement (Table 7).

Table 7. Barriers cited by community pharmacists to greater involvement in health improvement

	Health Promotion Authority Wales 1991 (n = 724)	BMRB 1993 (n = 1330)
Finance	54%	84%
Time		66%
Public apathy	34%	
Relationship with GPs	31%	
Lack of knowledge	22%	

Availability of finance and time-pressures were commonly-perceived barriers that also featured in the peer-reviewed evidence (Report 1). The Welsh data demonstrated pharmacists' concerns about the receptiveness of the public and of doctors to their health promotion activities. Perceptions of customers' response to health promotion advice were explored in a large qualitative study involving eight discussion groups and 18 individual interviews with community pharmacists (B3: Hughes 2000, p68). Pharmacists were typically not proactive in health promotion, feeling that they could only respond to customer queries rather than initiating discussions on health. Raising health promotion issues with most clients was seen as 'highly problematic' as the pharmacist had no way of knowing who might appreciate the advice and who might be offended (B3: Hughes 2000, p68).

Education and training

Undergraduate and pre-registration training

At the end of the 1980s pharmacists perceived that their undergraduate and pre-registration training had not prepared them sufficiently for a role in health improvement. Almost three-quarters of community pharmacists reported that their undergraduate education gave them 'no' or 'poor' training in advice-giving on health education topics (B3: Shafford & Sharpe 1989, p80). In relation to pre-registration training, 48% of community pharmacists stated that their training had provided them with 'no' or 'poor' training in advice-giving on health education (B3: Shafford & Sharpe 1989, p80).

An educational intervention with pharmacy undergraduates was shown to have a positive effect on knowledge about drug misuse and HIV but a lesser effect on attitudes towards providing services (B3: Sheridan 1995, p66).

Postgraduate training

A questionnaire survey of 100 community pharmacists

Analysis / discussion point:

Pharmacists' attitudes to their role in health promotion

Although the majority of pharmacists rate their role in health promotion as being important, current activity levels are low due to a reported combination of barriers including lack of remuneration, time-pressures and perceptions of a negative response to these activities by GPs and the public. However, a more recently conducted UK survey of current activity (Report 4)⁸ has revealed an explosion in local community pharmacy health improvement projects being run in conjunction with NHS primary care organisations in the following areas:

- smoking cessation;
- sexual health;
- drug misuse;
- prevention of heart disease;
- diabetes awareness;
- obesity and weight reduction;
- accident prevention;
- travel health;
- winter pressures, e.g. immunisation awareness;
- miscellaneous, e.g. campaigns specifically targeted at ethnic minority group, mental health promotion.

Further evaluation of these services (including means of remuneration and time spent in these activities) is necessary to accurately determine the extent to which these reported barriers exist today.

⁸ Local Pharmacy Health Development Projects – Testing Models of Implementation in Community Pharmacy (2002). Unpublished work available on request from phs@rpsgb.org.uk; 020 7572 2265.

(response rate 66%) found that just over half (53%) had undertaken training in health promotion and overall 86% said they would be willing to undertake further training (B3: Dewsbury-Mason 1998, p84).

Pharmacists who received training as part of their participation in a health promotion programme (High Street Health, HSH) expressed a desire to spend less time dispensing prescriptions and more time advising customers. Training appeared to have resulted in pharmacists taking a more holistic view of health (B3: Anderson 1997, p82) an approach that is not generally predominant among community pharmacists without training (B3: Dewsbury-Mason 1998, p84). In addition, covert research on the HSH scheme showed that participating pharmacists spent significantly longer with clients consulting on smoking cessation and that they used leaflets more proactively (B3: Anderson 1997, p82).

Pharmacists in a focus group study were reported to be 'poor' at identifying their own training needs in relation to the supply of EHC (B3: Seston *et al* 2000, p72), for example, participants expressed concerns about 'clinical' issues but these were generally ill-defined. There was an identified need for training in how to conduct consultations for emergency contraception in a non-judgemental way. The need for training on EHC supply to focus on consultation skills rather than technical information was also found in a large qualitative study of community pharmacists (B3: Hughes 2000, p68).

In a study of the effect of training on smoking cessation advice, most pharmacy staff reported that the training had led to a change in their consultations with customers (B1: Sinclair 1997, p65). Pharmacy teams that had received training were not only significantly more knowledgeable about smoking cessation but also significantly more confident and positive about outcomes than were controls (B1: Sinclair 1997, p65). In addition, customers rated their discussions more highly with pharmacy staff from the intervention group.

Education and training of pharmacists in preparation for a health improvement role

Although pharmacists have reported their undergraduate and pre-registration training carried out in the late 1980s as being 'non-existent' or 'poor' in preparing them for an advice-giving role, no recent data to allow comparisons with the current situation was identified during the investigation for this report.

In contrast, however, pharmacists who have received post-graduate training in health improvement are significantly more positive in relation to their advice-giving role and expected health outcomes but these findings should be interpreted cautiously as it is likely there is a 'self-selection' effect. There are, however, significant benefits to be obtained for both pharmacist providers and pharmacy users when pharmacists undertake specific training in

External stakeholders

Relevant findings from peer-reviewed literature:

none relevant.

Key findings from non peer-reviewed literature:

- The extent of sustained joint working between community pharmacists and other members of the primary health care team is generally low but may be improved by joint training (B3).
- Primary health care team members expressed some general anxieties about the wider role of community pharmacy in promoting health but reported having confidence in individual pharmacists known to them (B3).
- New community pharmacy service developments such as EHC and head lice management were well-received by primary care health professionals (B3).

Extent of pharmacist involvement with primary health care teams

The extent of joint working between community pharmacists and other primary health care team (PHCT) members was explored using a mix of quantitative and qualitative methods in three studies. In a postal survey of 373 community pharmacists (response rate 78%) 14% of respondents reported regular meetings with PHCT members, and participation in collaborative projects or initiatives was reported by 13% (B3: Elliott 1996, p84). Some respondents commented that they had wished to take part but had not been invited to collaborate, indicating a reactive stance. Isolation from other health professionals was widely reported in a study of barriers and opportunities to community pharmacists' wider involvement in contraceptive and sexual health advice (B3: Hughes 2000, p68). In a study of advice on women's health issues, referrals from community pharmacists to other health professionals were found to be significantly related to a knowledge of local referral procedures and opening hours (B3: McAree 2001, p69).

Data from interviews with pharmacists reporting joint working in Elliott's (1996) study suggested that the survey results overestimated the amount of collaboration and teamworking. Of 15 pharmacists who reported such collaboration, 10 had established continuous joint working, while in the other five cases it was minimal or intermittent. It was noteworthy that pharmacists dispensing higher numbers of prescriptions were more likely to report collaboration. Close proximity to a GP surgery with no other pharmacies close by was also associated with collaborative work. Interviews with Health Authority Pharmaceutical Advisers showed them to have a key role in organising local initiatives but that such projects were for 'limited time periods, with limited funding and inadequate evaluation and generally involving an enthusiastic minority of pharmacists' (B3: Elliott 1996, p84).

Effect of joint learning events with PHCTs

Local multidisciplinary health improvement workshops for PHCT members that community pharmacists were invited to attend were evaluated prior to and following their delivery in a commissioned report (B3: Scott 1994, p85). Nine teams, each centred around one general medical practice, took part in the workshop. Interviews with over 40 participants were conducted pre-workshop, then at one week and three months post-workshop. Although PHCT members expressed confidence in individual pharmacists they often stated general concerns about community pharmacy in relation to possible wider roles. The key concerns were around community pharmacists' lack of access to patients' full medical history and about potential conflicts of interest arising from commercial activities. Nevertheless PHCT members were predominantly positive towards pharmacists' involvement. The community pharmacists themselves were pleased to have been invited to participate in the workshop but expressed anxieties about what they would be able to contribute and about how their presence would be received by PHCT members. This professional reticence contrasted with the attitude of

Analysis / discussion point:

- Pharmacists report isolation from other health professionals as one of the barriers to developing sexual health services.
- Referrals from pharmacists to other health professionals are higher where pharmacy staff have knowledge of relevant local services.
- Collaborative working is reported to be higher where the pharmacy dispenses high numbers of prescriptions or is the only pharmacy near a GP surgery. This suggests that collaborative working is currently associated with the existing mode of remuneration for pharmacy services.
- PHCT members are generally positive about pharmacists' involvement in service development, however, reservations exist around community pharmacists' lack of access to patients' full medical history and about potential conflicts of interest arising from commercial activities.
- Joint training events between pharmacists and PHCT members appear to be useful in promoting collaborative working but pharmacists report finding it difficult to find time to leave the pharmacy and attend 'team meetings'.

PHCT members, most of whom welcomed the idea of pharmacist participation. Three months after the workshop there was evidence of greater contact between pharmacists and the PHCT through specific joint events and the issuing of invitations by almost all the practices to the community pharmacists to attend practice meetings. However, attendance by pharmacists was reported to be low due to difficulties in making arrangements to leave the pharmacy premises.

4 DISCUSSION

Scope and quality of the material

A substantial number of studies (37) met the criteria for the review, representing considerable investment of resources by those conducting and commissioning the research. The scale of the research ranged from small local studies to national surveys and the quality of most studies was reasonable to good. A range of methodologies was used and the non peer-reviewed literature was particularly rich in qualitative studies with pharmacists and users. Low response rates to surveys or requests to participate in interviews was the most common reason for a study to be excluded from the review. It is noteworthy that most of the research with pharmacy users was based on convenience samples, hence these studies were graded as C1, although the quality of other aspects of the research was high and the studies would otherwise have merited a higher grading. Given the methodological challenges of seeking to construct a systematic sample of a population of service users it seems reasonable to accept that convenience samples might be considered adequate.

Some of the studies identified may have undergone a form of peer review process, especially commissioned research (although none of the reports considered made reference to such review). The research undertaken and submitted for higher degrees will have been subject to a form of peer review through the internal academic supervision process and assessment by internal and external examiners. Nevertheless little of this work found its way into the peer-reviewed literature. This body of work can help to inform the pharmacy profession and healthcare commissioners about the future development of community pharmacy-based services.

Where does the non peer-reviewed literature support the findings of the peer-reviewed literature?

The non peer-reviewed literature supports the findings from the peer-reviewed literature in several main areas.

Firstly, that community pharmacists are viewed by the public as experts who advise on medicines rather than health and illness. Secondly, that training has the potential to change community pharmacists' behaviour and orientate their practice towards effective health improvement activities. Thirdly, that the use of patient medication records to identify pharmacy users 'at risk' of certain illnesses can be a very effective way to identify and persuade this group to attend for consultation or treatment. Fourthly, that the community pharmacy environment seems to be an appropriate setting to deliver certain health interventions including smoking cessation, the prevention of coronary heart disease (CHD), immunisations and the supply of emergency hormonal contraception (EHC). Finally, that pharmacists report being reluctant to proactively offer health advice lest it be unwelcome to the client but are more likely to advise on general health issues if medicines are involved.

What new evidence does the non peer-reviewed literature contribute?

The non peer-reviewed literature provides new evidence on community pharmacists' public health role in relation to the primary health care team and on user and pharmacist perspectives of sensitive health topics such as EHC supply, head lice management and drug misuse services. These findings are important because they demonstrate the acceptability to pharmacy users of seeking and receiving advice on sensitive health topics within the community pharmacy setting. Evaluations of the head lice programmes sought feedback from other health professionals and demonstrated that GPs and school nurses rated these services highly and wanted them to continue.

The non peer-reviewed literature also provided further evidence of both pharmacy users' perceptions of, and their feedback on, actual pharmacy services. The data demonstrated the difference in reported perceptions of those who have not consulted a pharmacist about a sensitive topic and the experience of those who have. People who have used pharmacy services for health development consultations (including sensitive health

issues) have a higher level of comfort about privacy and confidentiality than those who have not.

In addition, the non peer-reviewed literature highlights that pharmacies are frequently used by people living in deprived areas and who are less affluent. Community pharmacies have the potential to contribute to reduction in health inequalities because they are regularly accessed by those who are most likely to have poor health chances.

Health topics

The search of the non peer-reviewed literature revealed additional health topics that had been provided in a community pharmacy-based setting and had been sufficiently evaluated for inclusion in this review. Topics included: sexual health; head lice management; mental health; the prevention of transmission of infection; and injury prevention. More details on each health topic is provided in the Results section.

Factors affecting the effectiveness of community pharmacy-based activities to improve health

Several studies showed that some pharmacy users expressed concerns about the level of privacy in community pharmacies and that a pharmacy might be selected, or deselected, depending on the facilities for private discussion. This was found to be particularly important in research on consumer attitudes to pharmacy advice on contraception and sexual health. The results of surveys of women who obtained EHC from community pharmacies were positive overall but indicate that for some pharmacies there is a need to review facilities, with approximately one in five women perceiving insufficient privacy. Similarly, studies of head lice management services showed that some users expressed concerns about the level of privacy during their consultation. Pharmacists can use this feedback to review how and where discussions are held in the pharmacy.

User perceptions of confidentiality were explored in studies on EHC and osteoporosis screening. The findings

suggest that publicity about the requirements for pharmacists and their staff to maintain confidentiality may also be needed so that pharmacy users are more aware of the pharmacist's obligations to ensure both privacy and confidentiality where appropriate. It is also possible that user perceptions will change over time as more pharmacies are refitted with provision for a consulting room or an obvious 'quiet area', or because pharmacies providing these facilities are preferably selected by users.

Interestingly, there is some evidence of a gap between pharmacists' and users' perceptions of what might constitute 'privacy' in the pharmacy. While some health topics are perhaps more obviously sensitive (e.g. EHC) and may require a lot of privacy, pharmacists may see some other topics as 'routine' and not necessarily needing such sensitive management (e.g. head lice treatment). Further research is needed to address this issue and also track any changes in premises development and the resulting use of pharmacies. It is possible that user surveys recommended in the implementation of clinical governance could also provide direct feedback to pharmacists and their staff.

Stakeholder views

User perceptions of community pharmacists

A common theme reported by users was that although they had often identified specific information needs they did not generally perceive the pharmacist as a source of health advice. Instead users tended to cite the GP as the key source of health information and advice but, nevertheless, they perceived the pharmacist as a highly appropriate source of advice about the use of aspirin in CHD prevention and welcomed the increased convenience and access resulting from deregulation of the supply of EHC. These findings suggest that users are more likely to accept the community pharmacist's role as health adviser, at least initially, when related to medicines supply.

Community pharmacists' perceptions of their advice-giving role

Pharmacists also have concerns about doctors' views of their involvement in health improvement. These are important barriers to opportunistic health improvement activities and involvement in wider service provision. Given the sensitivity of certain health topics, such as sexual health and obesity management, it is understandable that pharmacists might prefer to take a reactive rather than proactive role on these issues, however in other areas, such as heart disease prevention, the non peer-reviewed research suggests that users would already welcome information and advice from the pharmacist. Promotion of the pharmacist's role in information giving to the public was suggested by pharmacists, in some studies, as a strategy to increase utilisation of the pharmacist's advice.

Community pharmacists and external stakeholders

The non peer-reviewed literature provides new evidence on pharmacists' health improvement role in relation to the primary health care team. Research conducted in the mid-1990s suggested low levels of collaborative working between community pharmacists and other members of the primary health care team. The findings suggested that only 10% of community pharmacists had sustainable joint working underway with local GPs. Multidisciplinary workshops were shown to increase shared understanding of the contribution that community pharmacists might make to health improvement as part of the primary health care team and to lead to an increase in joint working three months later. Pharmacists themselves were reticent about what contribution they might make to improving health within this framework. Research showed that low awareness among community pharmacists of local support groups and other agencies is likely to be a barrier to increasing referrals from the pharmacy to non-primary care services.

5 CONCLUSIONS

The non peer-reviewed literature strengthens the review of evidence by confirming the key findings of Report 1 (the peer-reviewed literature), by adding new material on health topics and on the relationships between community pharmacists and the primary health care team, and by providing further insights into pharmacist and user attitudes and behaviours.

There is a high degree of expressed interest among users in the availability of further information and advice from pharmacists, although the pharmacist is not seen as a primary source. The research findings suggest considerable scope for joint working of pharmacists, users and healthcare commissioners to develop pharmacies as a local and accessible advice point complementary to existing services.

Since the review was conducted the modernisation of the NHS has continued at pace. Following announcements for structural reform and the devolution of decision-making to a more local level, there is a willingness to pilot new ways of working to improve access and quality of services and release a plethora of opportunities to develop community pharmacy services in order to suit the needs of the local population and to integrate more closely with existing NHS services. It is possible that the level of joint working between community pharmacists and the primary health care team will already have increased as a result of recent initiatives, such as the implementation of Patient Group Directions for emergency contraception and the development of smoking cessation services. In addition, increasing numbers of community pharmacists are undertaking session work with local GP practices for prescribing and medication review purposes. It will be important to continue to track progress in this area and to ensure the integration of the community pharmacist into the primary health care team and local community from the perspective of health improvement.

Further research is also needed to measure any change in the public's perception of the pharmacists' role in health improvement. Evaluation of innovative approaches to services and premises development will also be crucial to informing service design to meet the needs of users, and particularly in relation to queries about approaching the pharmacist for general health advice and addressing perceptions about privacy and confidentiality.

REFERENCES

- Anderson C (1997). Health promotion by community pharmacists. PhD thesis, Department of Pharmacy, King's College, London.
- Anderson C, Bissell P, Sharma S & Sharma R. Manchester, Salford and Trafford Health Action Zone (2001). Report into the provision of Emergency Contraception in Community Pharmacy Via Patient Group Directions, University of Nottingham.
- Anonymous (1993). The Pharmacy Healthcare Scheme (Qualitative study). Health Education Authority Research Report. London: Health Education Authority.
- Aston University and MEL Research (1991). Consumer expectations of community pharmaceutical services. Report to the Department of Health.
- BMRB (1993). The Pharmacy Healthcare Scheme (Quantitative study). Health Education Authority Research Report. London: Health Education Authority.
- BMRB (1996). Baseline mapping study to define access to and usage of community pharmacy. Report commissioned by Royal Pharmaceutical Society of Great Britain.
- Campbell Keegan (1992). Ask the pharmacist: advice on safer sex and contraception. Report commissioned by the Pharmacy Healthcare Scheme Steering Group.
- Coggans N, Johnson I, McKellar S, Grant L & Parr PM (2000). Health promotion in community pharmacy: perceptions and expectations of consumers and health professionals. Department of Pharmaceutical Studies, University of Strathclyde. Report commissioned by the Scottish Office.
- Dewsbury-Mason C (1998). Community pharmacists and health promotion training, activities and attitudes. MSc thesis, University of Kent.
- Edwards L (2000). Levonelle – P status and women's needs: qualitative research. Report commissioned by Schering Healthcare.
- Elliott J (1996). The role of community pharmacists in relation to the primary healthcare team. Report commissioned by the Health Education Authority.
- Hariri S (1998). Multimedia health promotion in community pharmacy. PhD thesis. Department of Pharmacy, King's College, London.
- Hassell K, Rogers A, Noyce P & Nicolaas G (1998). The public's use of community pharmacies as a healthcare resource. Report to the Community Pharmacy Research Consortium.
- Health Promotion Authority Wales (1991). Pharmacy Healthcare Scheme survey (Wales). Report. Health Promotion Authority Wales and Welsh School of Pharmacy.
- Hughes K (2000). Pharmacists and contraceptive and sexual health issues: qualitative research to inform of barriers and opportunities. Report to the Health Education Authority.
- Kinghorn I (1998). The health education needs of patients buying or receiving aspirin on prescription for thromboprophylaxis. MSc thesis, Department of Medicines Management, Keele University.
- Lambeth, Southwark and Lewisham Health Action Zone (2002). A timely service: Lambeth, Southwark and Lewisham Health Action Zone project on access to emergency hormonal contraception through accredited community pharmacies. Report. Lambeth, Southwark and Lewisham Health Action Zone.
- Martin-Hamblin-GfK (2002). Report of the Osteoporosis Pharmacy Pilot Study.

- Matheson C (1999). Community pharmacy services for drug misusers: a study of the perspectives of service users and providers. PhD thesis, University of Aberdeen.
- McAree DP (2001). Women's health: community pharmacy care. PhD thesis. School of Pharmacy, Queen's University of Belfast.
- McGovern EM, Lindsay H, Taylor A & Bryson SM (1999). Improving attitudes towards sugar-free medicines. Conference Proceedings, UK Clinical Pharmacy Association, Blackpool.
- McGovern EM, Bryson SM, Lennie M, Roddick E & Anderson C (2001). Use of head lice products in three Local Healthcare Co-operatives. Conference 2001, Royal Pharmaceutical Society of Great Britain Local Health Care Cooperative.
- McGovern EM, Tennant S & Mackay C (2001). Audit of returned medicines to community pharmacies. Conference 2001, Royal Pharmaceutical Society of Great Britain Local Health Care Cooperative.
- National Pharmaceutical Association (2001). Sunderland integrated head lice infection management service – an interim report. Report for the National Pharmaceutical Association.
- Pharmacy Alliance (2002a). Emergency hormonal contraception: customer survey. Report for Schering Healthcare.
- Pharmacy Alliance (2002b). Emergency hormonal contraception: pharmacy survey. Report for Schering Healthcare.
- Philips Z, Whyne D, Parnham S, Slack R & Earwicker S (1999). The role of community pharmacists in counselling patients and prescribing medication for the treatment of head lice. Report commissioned by the National Pharmaceutical Association, Nottingham University.
- Reilly V, Bresnen G & McGovern EM (2001). An examination of the role of the community pharmacist in managing stress and anxiety. MSc thesis, School of Pharmacy, Liverpool John Moores University.
- Scott J (2000). Development, implementation and evaluation of harm reduction techniques for drug users. PhD thesis, Robert Gordon University, Aberdeen.
- Scott K (1994). Involvement of community pharmacists in Health Education Authority primary healthcare team workshops – report on qualitative evaluation. Report commissioned by the Health Education Authority.
- Seston E, Holden K & Cantrill J (2000). Deregulation of hormonal emergency contraception: pharmacists' concerns and support needs. Report for Royal Pharmaceutical Society of Great Britain.
- Shafford A & Sharpe K (1989). The pharmacist as a health educator. Research Report 24. London: Health Education Authority.
- Sheridan J (1995). HIV/AIDS and drug misuse: perspectives of pharmacy undergraduates and pharmacists. PhD thesis, University of London.
- Sinclair HK (1997). Community pharmacy and smoking cessation: training in behavioural change. PhD thesis, Department of General Practice and Primary Care, University of Aberdeen.
- Thomas G (2000). A study of the advice and treatment recommended for head lice infection in the Wrexham Local Health Group. MSc thesis, Department of Medicines Management. Keele University.
- Watson L, Bond C & Gault, C (2003). A Survey of community pharmacists on prevention of HIV and hepatitis B and C: current practice and attitudes in Grampian. *J Public Health* (In press).
- Williams A, Bond CM, Winfield AJ, Calder G, Taylor R & Ritchie LD (1993). A public health role for the community pharmacist: a pilot study to identify patients who may be considered for influenza immunization. Report to the Scottish Office.

Appendix 1. National Service Frameworks: categorisation of evidence

The Department of Health categorises individual studies according to the standard classification set out in its National Service Frameworks:

Evidence from research and other professional literature

- A1** Systematic reviews which include at least one randomised controlled trial (RCT) e.g. systematic reviews from Cochrane or NHS Centre for Reviews and Dissemination.
- A2** Other systematic and high quality reviews which synthesise references.

- B1** Individual RCTs.
- B2** Individual non-randomised, experimental/intervention studies.
- B3** Individual well-designed non-experimental studies, controlled statistically if appropriate. Includes studies using case control, longitudinal, cohort, matched pairs or cross-sectional random sample methodologies, and well-designed qualitative studies, well-designed analytical studies including secondary analysis.

- C1** Descriptive and other research or evaluation not in B (e.g. convenience samples).
- C2** Case studies and examples of good practice.

- D** Summary review articles and discussions of relevant literature and conference proceedings not otherwise classified.

Appendix 2 Details of reviewed evidence

The abstracted papers are listed by health topic in the order the findings are included in the 'Results' section of the report. Each paper has an evidence grading (see 'Introduction – Criteria for inclusion of evidence' and Appendix 1 for an explanation of the categorisation of grade used).

Contents

Health Topics

Smoking cessation	65
Coronary heart disease – the use of aspirin in prevention	65
Drug misuse	66
Sexual health	67
Emergency hormonal contraception	69
Immunisation	73
Head lice	73
Oral health	76
Mental health	77
Prevention of transmission of infection	77
Accidental injury prevention	78
Factors affecting the effectiveness of community pharmacy-based activities to improve health	79
Stakeholder views	81

SMOKING CESSATION

Title, authors, source type, year and evidence grading Sinclair HK.

Community pharmacy and smoking cessation: training in behavioural change. PhD thesis, Department of General Practice and Primary Care, University of Aberdeen (1997). **B1**

Objectives To develop and evaluate a training package for community pharmacists and their assistants to improve the counselling in smoking cessation provided in community pharmacies.

Study design Randomised controlled trial (randomised by pharmacy to intervention and control). Interviews to gain insight into the pharmacy support process. Intervention pharmacists and pharmacy assistants were invited to attend a two-hour training session. Outcome measure was self-reported smoking cessation rates of the two groups at one, four and nine months. A sub-sample of pharmacy customers (25 intervention; 25 controls) were interviewed by telephone six months after registration. Pharmacists completed a questionnaire immediately after training and 2 and 12 months later. Telephone interviews were conducted with 20 pharmacy personnel.

Sampling and response rate All 76 non-city Grampian community pharmacies were invited to

participate and 62 (82%) agreed. All intervention pharmacies were represented at the training (40 pharmacists and 54 assistants).

Key findings Pharmacy personnel thought the stage of change model was a good way of understanding stopping smoking. Most reported that the training had made a difference to the way they counselled customers. At 2 and 12 months the intervention pharmacy teams were significantly more knowledgeable, self-confident and positive about the outcome of pharmacy counselling than controls.

Customers (224 intervention; 268 controls) were recruited to the study. Significantly more intervention subjects were not smoking at each follow-up: one month 37% cf. 29%; four-months 20% cf. 13%; nine-months 12% cf. 7%. Statistical analysis showed these findings to be robust to confounders (sex, age, deprivation, nicotine dependency). Cluster randomization was found to have a negligible effect. Intervention respondents were significantly more likely to have discussed stopping smoking with pharmacy personnel (85% cf 62%). Intervention subjects rated their discussion more highly, 34% cf 16% of controls rated it as 'very useful'.

CORONARY HEART DISEASE – THE USE OF ASPIRIN IN PREVENTION

Title, authors, source type, year and evidence grading Kinghorn IA.

The health education needs of patients buying or receiving aspirin on prescription for thromboprophylaxis. MSc thesis, Department of Medicines Management, Keele University (1998). **C1**

Objectives To establish the reason for purchase/prescription of aspirin; assess the patient's knowledge of aspirin's use and mode of action in coronary heart disease (CHD) prevention; assess patients' knowledge of CHD risk factors;

identify key information needs of patients in relation to aspirin; establish the acceptability of advice about aspirin in the pharmacy and patients' preferred content and format of advice.

Study design Telephone survey using a pre-piloted structured interview schedule (mean 23.2 minutes). Patients buying or receiving aspirin on prescription were recruited from six community pharmacies from a range of socio-economic locations in Glasgow.

Sampling and response rate Of 148 individuals who were approached to take part, 128 (91.4%)

agreed. Of these the researcher was able to contact 108 during the study period.

Key findings 70 (64.8%) respondents received their aspirin on prescription and 38 had purchased it. Most respondents were taking aspirin for secondary prevention. Information needs were identified in relation to both aspirin and CHD

prevention. The pharmacist was considered highly appropriate as a source of advice on both aspirin and CHD but pharmacists were not considered to be providing this service currently. Pharmacy premises were considered by some to lack privacy. Personal input from the pharmacist was considered important in information provision.

DRUG MISUSE

Title, authors, source type, year and evidence grading

Sheridan J.
HIV/AIDS and drug misuse: Perspectives of pharmacy undergraduates and pharmacists. PhD thesis, University of London (1995). **B3**

Objectives To investigate attitudes and knowledge of pharmacy undergraduates and community pharmacists of HIV/AIDS and drug misuse; to investigate community pharmacists' practice in relation to drug misuse and harm reduction services; to investigate clients' views on community pharmacy services for drug misusers.

Key findings Pharmacy undergraduates were found to have positive professional opinions, but also to hold some negative personal opinions about HIV and drug misuse. An educational

intervention was shown to have a significant positive effect on knowledge but a less noticeable effect on attitude.

Over half of the community pharmacists were dispensing controlled drugs to drug misusers and 13% were providing needle exchange. Community pharmacists, like undergraduates, had positive professional attitudes and some negative personal attitudes towards drug misuse. The latter tended to be more negative, indicating that practice experience may have an effect.

Drug misusers considered themselves to be stigmatised by community pharmacists, although some reported positive experiences. Clients perceived community pharmacists to be service providers but not a source of advice.

Title, authors, source type, year and evidence grading

Matheson C.
Community pharmacy services for drug misusers: a study of the perspectives of service users and providers. PhD thesis, University of Aberdeen (1999). **B3**

Objectives To investigate the effect of pharmacists' attitudes to drug misusers on the services provided and how services are delivered as perceived by the pharmacist and the drug misuser.

Study design Four methods were used. A structured postal questionnaire collected quantitative data from all community pharmacy managers in Scotland on their attitudes towards and level of involvement in service provision for drug misusers ($n = 1041$). Telephone interviews were conducted with a sub-sample of 45 pharmacists to obtain in depth information. Face-to-face interviews with 124 drug misusers were

conducted in four cities and adjacent rural areas. Observation of interactions between drug users and community pharmacists was conducted and field notes taken.

Sampling and response rate Questionnaire response rate: 79%.

Key findings Controlled drugs were dispensed to drug misusers by 61% of respondents. Methadone was dispensed by 55% and methadone administration was supervised by 19%. Positive attitudes were associated with higher levels of service provision. Pharmacists were motivated to provide services by a desire to reduce the spread of blood-borne diseases and to expand their professional services. Barriers were concerns for the effect on other customers, safety, workload and inadequate remuneration.

Drug misusers perceived providing clean injecting equipment and methadone dispensing as

important services. Drug misusers asked pharmacists for advice on general health and few asked for advice related to drug misuse. Being treated discreetly and having a good relationship with the pharmacist/staff encouraged service uptake. Negative treatment promoted stigmatisation and precipitated negative behaviour.

The author concluded that remuneration, professional endorsement and better communication with other services would encourage pharmacists to provide services identified by drug misusers, such as greater availability of injecting equipment.

Title, authors, source type, year and evidence grading Scott J.

Development, implementation and evaluation of harm reduction techniques for drug misusers. PhD thesis, Robert Gordon University (2000). **C1**

Objectives To explore the provision of a pharmacist-led information and advice service at a voluntary sector drugs agency.

Study design Field study monitoring the role of a pharmacist within a voluntary sector drugs service. Members of the public and other external contacts could access the service one 3-hour afternoon session each week when the pharmacist was present in the agency. Drug agency workers had telephone access to the pharmacist throughout working hours.

Key findings A total of 77 contacts were made with the pharmacist during the 26 weeks that the service was in operation. Of the 77 contacts, 45 were with Drugs Action workers, 25 with members of the public and seven with workers from outside organisations.

Members of the public were asked if they might consider asking the community pharmacist about their query and most said not. The non-judgemental attitude associated with the drugs agency and its staff was cited as the main reason why the query had been made there.

Drug information was the commonest type of query (37% overall, numbers slightly higher about prescribed than non-prescribed drugs). Drug testing was the next commonest (15%). About half the queries were answered using pharmacy 'core' knowledge, a quarter with 'specialist' knowledge and a quarter with both. The key specialist skill required was translating technical information into terms used in the 'drug culture'.

Other comments The findings indicate that there is a role for pharmacist query answering within drugs agencies. Some specialist knowledge was required. Client attitudes appear to be an important barrier to information and advice-seeking in community pharmacies.

SEXUAL HEALTH

Title, authors, source type, year and evidence grading Campbell Keegan.

Ask the pharmacist: advice on safer sex and contraception. Report commissioned by Pharmacy Health Care Steering Group (1992). **B3**

Objectives Examine pharmacists' views on their role on advising on safer sex and contraception; explore views on development and support needs for this role; investigate consumer views on pharmacists as an information source on safer sex / contraception.

Study design Structured interviews with pharmacists (telephone) and consumers (face-to-

face). Qualitative telephone and face-to-face interviews with sub-sample of respondents.

Sampling and response rate 'Clustered random sample of pharmacies across the UK'. Four regions: north; south; Wales; Northern Ireland. Of 168 pharmacists who were approached, 104 (62%) participated in the telephone interview; 63% worked for independents and 36% for chains. Qualitative interviews were conducted with 13 pharmacists. 224 consumers took part in the quantitative interviews (49% male, 51% female). Qualitative interviews were conducted with 17 consumers.

Key findings Of the pharmacists interviewed, 86% thought that pharmacists have an important role in promoting safer sex / contraception and 53% thought pharmacists should do more in this area. However, most (73%) pharmacists reported being asked for advice on contraception less than once a week. The researchers state that pharmacists generally took a reactive role, providing advice when asked. 64% of consumers said they would like more

advice on contraceptives / safer sex from the pharmacist. The most important factor in considering a pharmacist for advice was a quiet area (41%). No one spontaneously suggested they would go to the pharmacist for advice on safer sex or contraception, 38% saying they would go to their GP. However, on probing 30% reported having gone to the pharmacist for advice on contraception at some time in the past.

Title, authors, source type, year and evidence grading Hughes K.

Pharmacists and contraceptive and sexual health issues: qualitative research to inform of barriers and opportunities. Report for Health Education Authority (2000). **B3**

Objectives Explore barriers and opportunities around pharmacists working with contraceptive and sexual health issues. To explore pharmacists' current knowledge and experience in sexual health; to investigate attitudes towards giving advice and information on general health and sexual health; to consider support needs; to explore issues around pharmacy involvement in the provision of emergency hormonal contraception.

Study design Group discussions with five to six pharmacists plus individual interviews.

Sampling and response rate Eight discussion groups and 18 interviews. Pharmacists were excluded if they disagreed with the statement 'I feel that pharmacists have an important role to play in improving the health of the general public and promoting healthy lifestyles'. There were two groups for each of: independents; independent chains; large chains; supermarkets. Four groups were of pharmacists qualified for up to five years; the remainder for five or more years.

Key findings Most participants saw their role as 'revolving around the provision and sale of medicines', advising people on how to take medicines, and responding to queries about symptoms and how best to treat them. Ways in which pharmacy might evolve in the future that were mentioned most often were running clinics for diabetes and asthma, managing long-term medication, pharmacist prescribing and health promotion. Promoting the clinical and wider skills

of pharmacists to the public was seen as desirable. Participants thought that pharmacy had been left behind in relation to nurse prescribing, smoking cessation services and other health promotion areas. Pharmacists were isolated from other health professionals and each other. People did not typically ask pharmacists about general health issues. Pharmacists were generally not proactive in health promotion. They felt they could only respond to customer queries and 'raising health promotion issues with most clients was regarded as highly problematic'. There was no way of knowing who might appreciate the advice and who might be offended.

Health promotion activity was more likely to be formalised in larger chains.

The potential conflict of interest was raised where health promotion advice might not require the purchase of a product. While most pharmacists thought that providing the right advice led to benefits in the long term, there was discussion about the losses and gains in becoming more involved in health promotion.

Across the sample, involvement in sexual health promotion was limited and entirely as a result of customer queries. There was general agreement that expanding the role of pharmacists in this area was likely to be problematic. Many participants felt uncomfortable about this area of advice. A private area was seen by most as essential. When discussing EHC however participants generally saw more scope for involvement. There was support for deregulation of EHC, which was seen to offer more involvement in 'prescribing', increase pharmacists' status and provide a business opportunity. Concerns were expressed about liability, ethical issues and potential abuse. Training needs were felt to be around consultation skills rather than clinical information.

Title, authors, source type, year and evidence grading McAree DP.

Women's health: community pharmacy care. PhD thesis abstract, School of Pharmacy, Queens University of Belfast (2001). **B3**

Objectives To evaluate community pharmacists' knowledge, attitudes and competency in relation to women's health; to introduce and evaluate a pharmacy-based advice service for women.

Study design Pharmacists' knowledge was measured at baseline and following a distance learning course using a postal questionnaire. A postal questionnaire measured pharmacists' attitudes towards providing advice on women's health. 521 female Boots pharmacy customers were interviewed face-to-face by a pre-registration graduate to identify health issues of importance to women and to ascertain their opinions and reservations on aspects of a dedicated pharmacy-based service. Pilot study in four community pharmacies.

Sampling and response rate Of 350 pharmacists, 216 responded to the pre-course and 133 to the post-course test. Response rate was 273 (47.5%) completed

questionnaires from a valid random sample of 575. 602 questionnaires were distributed, 521 completed and 81 refusals (response rate: 86.5%). Pharmacist feedback from feasibility study was obtained through a seminar.

Key findings Of 350 pharmacists, 38 had completed the distance learning course and showed significant improvement in test scores. The attitudinal survey showed that pharmacists reported they were not embarrassed to discuss many women's health issues. Some concerns were expressed about confidence and knowledge deficits. Male pharmacists perceived themselves as significantly less knowledgeable or more embarrassed on a number of issues. Pharmacists' referral to other professionals was significantly related to their knowledge of opening hours and referral procedures.

The customer survey identified a number of factors that might influence use of a pharmacy advice service including quality and confidentiality. Pharmacists in the pilot study documented improvement in competency and knowledge. Clients were reported to respond positively to the service.

EMERGENCY HORMONAL CONTRACEPTION

Title, authors, source type, year and evidence grading Lambeth, Southwark and Lewisham

Health Action Zone.

A timely service: Lambeth, Southwark & Lewisham Health Action Zone project on access to emergency hormonal contraception through accredited community pharmacies. Lambeth, Southwark & Lewisham Health Action Zone (2002). Report. **B3**

Objectives To assess the knowledge and experience of users of the emergency hormonal contraception (EHC) Patient Group Direction (PGD) scheme.

Study design Questionnaire distributed to 1558 service users at the community pharmacies. The questionnaire covered user satisfaction and included opportunities for qualitative comments. Four qualitative interviews with service users to validate context. Individual and group interviews with participating pharmacists.

Sampling and response rate Response rate: 20% (315).

Key findings Of the service user respondents 98% reported being 'satisfied' or 'very satisfied' with the service and 90% said they felt 'comfortable' or 'very comfortable' discussing their request with the pharmacist. 78% felt there was sufficient privacy for their discussion and 76% reported no concerns about confidentiality. Concerns about confidentiality were higher in those under 20 years of age. Roughly 20% of respondents had concerns about privacy and/or confidentiality.

Provider pharmacist interviews highlighted the importance of good counter staff who could manage waiting customers. No pharmacist mentioned difficulty with the record-keeping required for the project. Pharmacists reported an increase in their professional self-esteem.

Title, authors, source type, year and evidence grading

Anderson C, Bissell P, Sharma S & Sharma R. Manchester, Salford and Trafford Health Action Zone.

Report into the provision of Emergency Contraception in Community Pharmacy Via Patient Group Directions. University of Nottingham (2001).

C1

Objectives Aims were to assess the knowledge, experiences and attitudes of service users (SUs); to explore the perspectives of pharmacist providers; to assess how pharmacists were operating the service.

Study design Questionnaire distributed to service users by pharmacists. The 28-item questionnaire was structured with space for additional comments. A sample of SUs were asked to participate in focus groups.

Interviews with 24 pharmacists.

'Mystery shopper' evaluation with researchers posing as SUs.

International literature review on emergency hormonal contraception provision.

Sampling and response rate Of 5020 questionnaires distributed to 53 pharmacies, 490 were returned (9.8%).

Key findings The age range of the 490 respondents was 15–52 years; a mean of 25. 37% were in college or higher education, a quarter were graduates and 14% were postgraduates. 17% were aged 19 years or under. Almost all the

SUs (99%) said they were 'very satisfied' or 'satisfied' with the way their emergency hormonal contraception (EHC) request had been handled. 99% indicated that they had received enough information from the pharmacist. 85% felt there was sufficient privacy; 80% were either 'unconcerned' or 'very unconcerned' about the confidentiality of their enquiry for EHC; 19% were 'concerned' or 'very concerned' about confidentiality and this was higher among under-19 years (28%). 70% of those who had used EHC before indicated that the pharmacy service was 'much better' than their previous service provider. Awareness of the pharmacy service came from friends and family (30%), TV or radio (26%), GP (15%), pharmacy poster (14%) and NHS Direct (9%). Respondents indicated that weekday evenings, Saturday mornings, afternoons and Sunday mornings were the most convenient time to access EHC. Focus group data showed that some participants had found it difficult to find out which pharmacies were providing the service and when they were open. A need was identified for information and advertising about the service. Most participating pharmacists expressed positive views about the service for both SUs and pharmacists. Some concerns were expressed about the additional workload that providing the service imposed, variability in remuneration practices between different pharmacy chain employers and lack of private space for conducting consultations. Few pharmacists reported that repeated use of EHC was a problem in practice.

Title, authors, source type, year and evidence grading

Pharmacy Alliance. Emergency hormonal contraception: Customer survey. Report for Schering Healthcare (May 2002a). **C1**

Objectives To assess customers' attitudes towards availability, sale and supply of emergency hormonal contraception (EHC) from the community pharmacy, and any information needs they may have; to establish women's views on the community pharmacy and the community pharmacist as sources of EHC supply and advice.

Study design Participating pharmacies (250) were selected as study sites from respondents to a pharmacist questionnaire. The questionnaire was sent to 2219, and 1426 (64%) pharmacists

responded, of whom 435 were willing to take part and 250 were selected to do so. Selection criteria were speed of return of questionnaire and numbers of packs of Levonelle sold (based on Unichem data). Each pharmacist was asked to recruit 10 EHC customers to complete the consumer survey. A 'customer refusal count sheet' was provided to document refusals.

Sampling and response rate The overall response rate was 30% (785). There were three groups of pharmacies: Pharmacy Alliance (PA), Moss Pharmacies and Unichem Community Pharmacy Initiative (CPI) scheme. Consumer questionnaires were returned for 59%, 40% and 24% of these pharmacies respectively. The percentages of possible forms returned were 36% PA, 24% Moss and 16% CPI.

Key findings The mean age of the 785 respondents was 26 years (range 14–53 years). 80.8% were white and 19.2% non-white. EHC was received on prescription by 42.4%, over the counter sale by 44% and Patient Group Direction (PGD) by 13.6%. The 16–20 age group recorded the highest level of access by PGD at 17.3%. Under 16-year olds received EHC on prescription in two-thirds of cases and PGD in 14.3%, with 21.4% not reporting a source. Women over 20 years were the largest group and more likely to buy EHC over the counter. Monday was the commonest day for obtaining EHC (200, 27.7%), with Saturday 14.9%, and no major differences between Saturday and other days of the week. 71% of women accessed

EHC within 24 hours of unprotected intercourse. Speed of access and convenience were the most common reasons reported for purchasing EHC over the counter. Prior to the current supply of EHC, 66.4% of women were aware that EHC was available without a prescription. Respondents rated a series of statements from 1 (strongly disagree) to 5 (strongly agree). There was a high level of satisfaction with the amount of advice and information received, the median response being 4 for both. Pharmacies were highly rated as a suitable place to obtain and discuss EHC, median response 4 for both. Anonymity was cited by 9.7% of respondents as a key reason for pharmacy purchase of EHC.

Title, authors, source type, year and evidence grading Pharmacy Alliance.

Emergency hormonal contraception: Pharmacy survey. Report for Schering Healthcare by Pharmacy Alliance/Unichem (May 2002b). **B3**

Objectives To assess the attitudes of community pharmacists in the UK towards the sale and supply of emergency hormonal contraception (EHC) one year after its deregulation to a P medicine; to determine the training undertaken by pharmacists and assistants on EHC; to determine the reasons why some pharmacists do not supply EHC.

Study design A structured postal questionnaire was sent to all 2219 members of Pharmacy Alliance (802), Moss Pharmacies (773) and UniChem's Community Pharmacy Initiative (CPI) scheme (644) in England, Scotland and Wales.

Sampling and response rate Response rate was 56% after the initial mailing and 64% after one reminder. Response rates were 76% (613) Pharmacy Alliance; 72% Moss (554) and 40% (259) CPI. The age and gender profiles of respondents were compared with Royal Pharmaceutical Society of Great Britain data and found to be similar. There were no publicly available data with which to compare the white/non-white respondent profile.

Key findings 55% of respondents were male and 69% were white. The mean age of respondents was 41 years. Overall 94% reported that they worked regularly in the pharmacy from which the survey was completed. Breakdown of respondents

by professional status was 58% managers, 31% owners, 7% locums (10% missing or other). Almost all (98.9%) respondents said they would supply EHC on prescription and 89.4% said they would sell EHC over the counter (OTC). EHC was being supplied under Patient Group Direction (PGD) by 20% of respondents and a further 51% who were not participating in a PGD scheme said they would like to do so. Of the 284 pharmacists involved in PGD schemes 66% (136) reported that under 16-year olds were excluded. Respondents were asked to rate a series of statements from 1 (strongly agree) to 5 (strongly disagree) Pharmacists disagreed that OTC availability had resulted in increased promiscuity/sexual activity (median response 4). They supported the supply of EHC on PGD to under 16-year olds (median response 2) and, while they were not in favour of OTC availability for this group (median response 4), they did not agree that all under 16-year olds requesting EHC from a pharmacy should be referred elsewhere. This suggests that pharmacists wish to use their professional judgement about supply. Pharmacists did not agree that they had found it difficult to deal with teenagers' requests for EHC (median response 4). Pharmacists felt that EHC availability OTC had provided an opportunity to develop new counselling skills (median response 2). They agreed that the price of the OTC product was a deterrent to patients buying it (median response 2). Most (91%, 1302) pharmacists reported that they had undertaken training on EHC. Centre for

Pharmacy Postgraduate Education (CPPE) workshops had been attended by 30% and CPPE distance learning used by 56%. Manufacturers' support information was used by 52%. Three-quarters of respondents reported having a 'set protocol' for sales of EHC. Women for whom

OTC EHC was identified as inappropriate were referred to GPs by over 90% of respondents and to Family Planning Clinics by around 60%. Pharmacists reported little feedback from their customers about positive or negative outcomes after use of EHC.

Title, authors, source type, year and evidence grading

Seston E, Holden K & Cantrill J. Deregulation of hormonal emergency contraception: Pharmacists' concerns and support needs. Report for Royal Pharmaceutical Society of Great Britain (2000). **B3**

Objectives To explore community pharmacists' views on the deregulation of emergency hormonal contraception (EHC) from POM to P (prescription only medicine to pharmacy medicine) and to examine training and support needs related to the switch.

Study design Focus groups with 14 community pharmacists.

Sampling and response rate Two groups were held; one with community pharmacists already providing EHC under a Patient Group Direction (8), the other with no experience of providing EHC (6). Pharmacists worked for a variety of employers including multiples, small chains and independents.

Key findings Pharmacists were 'poor' at identifying their own individual training needs. Most participants supported mandatory training before 'prescribing' deregulated EHC. Pharmacists expressed concerns about 'clinical' issues and these were generally ill-defined. Some participants were concerned about how they would deal with under-age clients. There was an identified need for training for pharmacists in how to conduct consultations for EHC in a non-judgemental manner. Pharmacists in both focus groups expressed concerns about possible 'abuse' of EHC although the authors comment that many of these concerns were based either on inaccurate information or subjective assumptions. The pharmacists who were already supplying EHC said that their prior concerns had rarely materialised in practice. The authors reported a sense that EHC was accorded a special status by participants when compared with other POM to P switches.

Title, authors, source type, year and evidence grading

Edwards L. Levonelle – P status and women's needs: qualitative research. Report for Schering Health Care (2000). **B3**

Objectives To explore women's information needs in relation to the POM to P (prescription only medicine to pharmacy medicine) switch of emergency hormonal contraception (EHC).

Study design Ten focus groups with women who had used / might use EHC.

Sampling and response rate Sampling stratified by social class and age/lifestage. Each group comprised half who were users of emergency contraception and half who were non-

users but not 'rejecters'. Those who said they would 'definitely' only obtain EHC from the doctor were excluded.

Key findings Participants were positive about convenience / accessibility of EHC following the switch. However, concerns were expressed about possible abuse of EHC. Key questions were: is it OK for me to do this?; what will my experience be if I do this?; what will happen to me afterwards?; Am I in time?; How effective is it? 'Myths' identified were worries about how often EHC could be taken and whether it might affect fertility in the longer term. The open pharmacy environment was a major concern, as was confidentiality / what records would be kept.

IMMUNISATION

Title, authors, source type, year and evidence

grading Williams A, Bond CM, Winfield AJ, Calder G, Taylor R & Ritchie LD.

A public health role for the community pharmacist: a pilot study to identify patients who may be considered for influenza vaccination. Report to the Scottish Office (1993). **B3**

Objectives To assess the potential for a public health role for community pharmacists using influenza as a 'tracer' condition.

To assess the community pharmacist's facility to identify patients who may be candidates for influenza immunisation.

Study design A systematic method (using patient medication records: PMR) and an opportunistic method (with customers asking for advice about specific symptoms or for influenza or requesting certain over the counter medicines) were used. The systematic method was used in one health centre pharmacy with 30,000 patient records on the PMR system and the opportunistic method in 25 pharmacies. In the systematic method a list of 'at risk' factors was compiled based on age and prescribed medication. Patients were selected randomly from the computer-maintained list and their medication records checked for 'at risk' factors. Records were selected in this way until 250 eligible patients had been identified. The computer file for each of these patients was then flagged such that the patient would be identified the next time they presented with a prescription. 'At risk' patients were asked to complete a short questionnaire. Pharmacists in the 'opportunistic' study were each given 10 questionnaires to be given to customers.

Sampling and response rate In the opportunistic study 37% of questionnaires were returned.

Key findings The systematic method using PMR was effective in identifying patients who would be candidates for influenza immunisation. 186 patients completed a questionnaire, 99% of whom fell within an 'at risk' category. A significant proportion of patients (69%) had not previously been immunised against influenza, and this percentage was lower in patients with asthma (25%). The authors comment that the research demonstrated that PMRs have valuable applications other than those associated with the dispensing process.

The opportunistic method showed some potential but was hampered by a poor response from community pharmacists. However, for the 74 people presenting with influenza-like symptoms, 97% were identified as having one or more 'at risk' factors. Feedback from the pharmacists indicated that lack of remuneration was the main reason for the low participation rate. Further work would be needed to confirm its value.

Other comments The authors recommended that: a national study using the PMR method should be conducted with a concurrent advertising programme and leaflets; that community pharmacy data collection could be used to monitor infectious disease outbreaks such as diarrhoea and infestation; that remuneration should be given to the pharmacist to cover time and the cost of training staff.

HEAD LICE

Title, authors, source type, year and evidence

grading Philips Z, Whynes D, Parnham S, Slack R & Earwicker S.

The role of community pharmacists in counselling patients and prescribing medication for the treatment of head lice. Report commissioned by the National Pharmaceutical Association Nottingham University (1999). **B3**

Objectives To assess the usage, acceptability,

effectiveness and effects on costs of community pharmacy, rather than general practice, being the first port of call for suspected head lice infestation

Study design Before (3 months) and after (3 months) design in one health authority area involving 32 community pharmacies in three Primary Care Groups and 120,000 registered patients. The scheme was continued beyond the initial three months for a further 15 months and

was monitored over this period. From January 1998 community pharmacy was promoted as the principal source of advice and treatment for head lice. After training, pharmacists provided education and counselling. Proof of infestation was required before treatment was recommended. Pharmacists supplied treatment from an agreed formulary where needed and were paid a fee regardless of whether treatment was supplied. Community pharmacists recorded prescriptions and over the counter consultations about head lice for three months prior to the study. During service provision pharmacists used a Pharmacy Prescription (PP1) form for both exempt and non-exempt patients. Prescribing Analysis and Costs (PACT) data were used to assess changes in prescribing of head lice treatments. Questionnaire surveys of patients (convenience sample of users) and health professionals were conducted.

Sampling and response rate Questionnaires completed by 336 patients and 201 health professionals (60 GPs, 42 pharmacists, 69 headteachers and 30 school nurses). No response rates stated.

Key findings Most of the 5710 scheme users in the three-month evaluation period were female (3846; 67.4%) and children (4383; 76.8%) and exempt from prescription charges (5394; 94%). A distinct trend away from consultations with the GP and towards community pharmacy consultations

was apparent within the first month of the scheme and continued throughout the evaluation period, with increasing self-referrals. Patients were typically registered with a GP in the surrounding area of the pharmacy used. No treatment was recommended in one-third of consultations. Prior to the scheme 30% of prescribed treatments were non-formulary compared with over 99% formulary during the scheme (malathion and 50ml or 55ml 'dose'). The ratio of prescribing of head lice treatments in the study area to the rest of the health authority area was 60% at baseline and fell to under 25% demonstrating decreased GP prescribing in the study area. Cost analysis showed that community pharmacy consultations cost less than GP consultations for head lice. The questionnaire results showed that patients and health professionals viewed the new arrangement as at least as acceptable as the old.

In total 336 questionnaires were completed by patients, most of whom were women. While the overall findings suggest that the scheme was well-received, 17.6% said they were embarrassed to speak to the pharmacist about head lice. Around half reported previous head lice infection. Health professionals were generally positive about the scheme, with GPs and school nurses finding it most beneficial. Head teachers had some concerns about the need for parental education and for parents to take responsibility for checking hair and ensuring treatment compliance.

Title, authors, source type, year and evidence grading National Pharmaceutical Association. Sunderland Integrated head lice infection management service – an interim report. Report for the National Pharmaceutical Association (2001).

B3

Objectives To enable easier access to appropriate treatment for head lice; to promote self-care.

Study design Two primary care groups provided a community pharmacy-based head lice management service. Participating pharmacists (initially from 32, later expanded to 47 pharmacies) were required to participate in training to facilitate consistency of advice. Head teachers were also invited to the training. From September 1999, GPs and community nurses were encouraged to refer clients to the pharmacy and not to prescribe head lice treatment. Pharmacists used a

prescription form HL1 to record consultations. The formulary was malathion only, with a 'dose' of 2 x 50ml. The nursing team carried out a telephone survey of a random sample of clients who had used the service.

Sampling and response rate Questionnaires were sent to GPs (38% response), surgery staff (54%), school nurses (68%), health visitors (28%), head teachers (57%) and pharmacists (87%).

Key findings Over a seven-month period 1847 clients accessed the service, with 1432 proving infection for 2897 household members. Most clients were female and children. The use of a chemical insecticide was avoided in 415 suspected infections. Pharmacists maintained 100% compliance with the local formulary, so all clients were treated in accordance with local guidelines.

Prior to the service commencing, concerns had been raised about a perceived lack of privacy in community pharmacies. The client survey showed that 42% said they were able to discuss their problem in private, 34% said they were not able to discuss their problem in private and 24% said they were 'not bothered'. The community pharmacy service was rated as: excellent (28%), very good (34%), good (20%), average (8%) and poor (4%). Just over half the clients recalled having head lice infection within the last two years. 98% reported they had understood what the pharmacist had said and 66% said their treatment was successful (10% said it was not). 74% said they intended to use the head lice detection comb (supplied by the pharmacist) on a regular basis. 71% of GPs said that the service had reduced the time they spent dealing with head lice infestation. Overall 34% said they rarely (31%) or never (3%) saw the client when prescribing head lice treatment. Over 90% of health professionals said they were happy for the service to continue and the majority (67-85%) agreed that the service had

'made my life easier'. When asked if the service should be extended to cover other conditions, 60% of pharmacists, 66% of GPs, 52% of surgery staff, 62% of school nurses and 36% of health visitors agreed.

Pharmacists were positive about the scheme and 93% said they would be happy to continue. Pharmacists reported that 67% of initial consultations took 5–10 minutes with 29% taking less than 5 minutes and 5% more than 10 minutes. Overall the cost of the new service was similar to the previous equivalent period, even though twice the quantity of treatment was supplied under the new service in line with treatment guidelines recommending two applications one week apart.

Other comments The authors comment that GP-time was previously used in dealing with head lice. They point out that the condition has no associated health risks, implying that GP-time freed by the scheme could be used to deal with more serious conditions.

Title, authors, source type, year and evidence grading Thomas G.

A study of the advice and treatment recommended for head lice infection in the Wrexham Local Health Group area. MSc Thesis, Department of Medicines Management, Keele University (2000).

B3

Objectives To establish the thoughts and beliefs of different professional groups on head lice infestations and treatment.

Study design Postal questionnaire to head teachers of junior and primary schools, school nurses, community pharmacists and GPs in one Local Health Group area in Wales.

Sampling and response rate Response rates: 65% (13 of 20) GPs; 90% (27 of 30) community

pharmacists; 84% (43 of 51) head teachers and 73% (11 of 15) school nurses.

Key findings Head teachers and health professionals were in agreement that head lice infection was an increasing problem. Schools did provide information to parents and that information was sometimes out of date or in conflict with that given by health professionals. Head teachers and GPs tended to have a preference for physical methods of head lice removal and the results suggest that this might be related to their thoughts on the safety and efficacy of insecticides. Variation in the recommendations made by different respondent groups had the potential to confuse parents. The author concluded that there was a need to develop a consistent approach to advice and information on detection and treatment of head lice.

Title, authors, source type, year and evidence grading McGovern EM, Bryson SM, Lennie M, Roddick E & Anderson C.

Use of head lice products in three Local Health Care Co-operatives. Royal Pharmaceutical Society of Great Britain Local Health Care Co-operative

Conference (2001). **C1**

Objectives To evaluate the use of head lice preparations.

Study design Thirty-four community pharmacies recorded requests for head lice treatments for one

month. Data collected included insecticide supplied, whether on prescription or over the counter and whether live lice had been found by the customer. The pharmacies also recorded when advice was given and if not, why not.

Pharmacists also asked the customers to complete a questionnaire.

Sampling and response rate Of 62 pharmacies, 34 (55%) participated.

Questionnaires were returned by 184 (47%) customers.

Key findings Of 392 requests for head lice products received, 219 (56%) were for over the counter (OTC) supply. Most requests (344, 87%) were for a pyrethroid product. Advice was reported to have been given on 88% of occasions unless the product had been used before (13) or

advice had been given by the GP (10). Head lice had been found by the customer on 297 (75%) occasions.

127 (69%) of customers said they intended to repeat the application and 69 (38%) intended to treat the whole family or all children irrespective of whether or not head lice was found. The quantities of product supplied were less than those recommended in current guidelines.

The authors note their concern that one-third of customers did not intend to repeat the treatment application and that over one-third intended to treat irrespective of whether or not other family members had head lice. It was concluded that the high cost of OTC treatment may be a barrier to use of appropriate quantities and to repeat applications.

ORAL HEALTH

Title, authors, source type, year and evidence grading McGovern EM, Lindsay H, Taylor A & Bryson SM.

Improving attitudes towards sugar-free medicines. UK Clinical Pharmacy Association Conference Proceedings, Blackpool (1999). **C1**

Objectives To determine pharmacists' attitudes and practice towards recommending sugar-free medicines.

Study design Interviews were conducted with 100 community pharmacists in 1996 and repeated in 1998. In the intervening period a sugar-free (SF) substitution list was circulated to pharmacists, and health promotion initiatives with support were undertaken. Questions covered attitudes towards provision of SF medicines, whether the pharmacist might attempt to persuade a customer to change to an SF version and advice offered when a sugar-containing medicine was sold. Ten pharmacies collected data for two weeks on all paediatric over the counter medicines sold and customers were asked about their attitudes towards SF medicines.

Key findings In 1996 and 1998 respectively, 35% and 64% of pharmacists said that sugar content of

a medicine would affect their product recommendation for a child. The percentage of pharmacists saying they would try to persuade a customer to change to a SF product increased from 45 to 69%. Offering dental advice when a sugar-containing product was sold was reported by 8% of pharmacists in 1996 and 21% in 1998. In the intervening period 22 pharmacists had participated in postgraduate education in oral health, 30 had participated in a local health promotion initiative on oral health and 76 reported having read relevant articles.

Most medicines for children (over 85% in both audits) were requested by name. Of the medicines recommended by the pharmacist the percentage that were SF increased from 55% to 100%. Most customers (60–70%) believed SF medicines to be important.

The authors note that pharmacists' attitudes towards SF medicines became more positive and this resulted in increased provision. Nevertheless they identified opportunities for further improvement. They conclude that a more proactive approach is needed, especially with those customers who believe SF medicines are important.

MENTAL HEALTH

Title, authors, source type, year and evidence grading

Reilly V, Bresnen G & McGovern EM. An examination of the role of the community pharmacist in managing stress and anxiety. MSc Thesis, Liverpool John Moores University (2001).

C1

Objectives To assess the involvement of community pharmacists in the management of stress and anxiety in one Local Health Care Cooperative (LHCC).

Study design Training evening held for pharmacy staff in the LHCC area. Resource manual produced for use by pharmacy staff. Interviews conducted with 12 community pharmacists and 12 pharmacy assistants. Pharmacy customers were asked to complete a questionnaire on frequency of symptoms, any treatment purchased and preferred sources of advice. Records were kept of leaflets on mental health promotion issued by pharmacy staff and self-selected by customers.

Sampling and response rate Two-week study

period where pharmacy customers were asked to complete the questionnaire.

Key findings Feedback on the training was positive, although not all LHCC staff attended. Most (88%) of those interviewed thought it was appropriate to offer advice about stress and anxiety management in the pharmacy. At least two symptoms of stress/anxiety were recognised by two-thirds of interviewees. Just over half of those interviewed knew about local self-help groups. 150 (90% response) customers completed the questionnaire. 88% reported that they had experienced symptoms of stress/anxiety and 49 (33%) had purchased a remedy.

Most people (76%) said the GP was their preferred source of advice on stress/anxiety, friends (36%) and pharmacist (13%).

866 leaflets were selected by customers with a median of 98 per pharmacy (range 41–155). The most popular resources were sleep and relaxation guides.

PREVENTION OF TRANSMISSION OF INFECTION

Title, authors, source type, year and evidence grading

Watson L, Bond CM & Gault C. A survey of community pharmacists on prevention of HIV and hepatitis B and C: current practice and attitudes in Grampian. *J Public Health* (2003). **B3**

Objectives To assess the activity, knowledge and attitudes of community pharmacists in Scotland in prevention of HIV and hepatitis B and C infections.

Study design Questionnaire survey of all 970 community pharmacies in 10 health boards in Scotland.

Sampling and response rate Response rate: 76% (740).

Key findings Most pharmacies (70%) were providing services for drug misusers. Nearly all (97%) stocked condoms. 59% of pharmacists

reported stocking extra strong condoms and two stocked dental dams. Just under two-thirds said they stocked leaflets relating to safer sex, HIV or hepatitis.

Fewer than half reported having contact lists for local agencies dealing with drug-related or sexual health problems. Knowledge of blood-borne pathogens was mixed and pharmacists' confidence in advice-giving was greater for HIV than for either hepatitis B or C. Few pharmacists were aware of recommendations for hepatitis B vaccination. Most felt that in the future pharmacists could have a greater role in prevention of these infections. The main barriers to greater involvement were time pressure, lack of a private area and lack of training.

ACCIDENTAL INJURY PREVENTION

Title, authors, source type, year and evidence grading Martin-Hamblin-GfK.

Osteoporosis Pharmacy Pilot Study (June 2002). **B3**

Objectives

- (1) To evaluate whether an osteoporosis screening service model is effective from the perspective of patients, GPs, the primary care team and the pharmacist.
- (2) To understand if the community pharmacy is an effective/suitable forum to identify patients at high risk of future fracture.
- (3) To gain an understanding of the programme's impact on patients' perception of the role of the pharmacy and the perceived benefits to patients.
- (4) To understand if the Patient Group Direction element of the service model is effective to allow timely access to treatment (not implemented, as Patient Group Direction not available for the pilot).

Study design Pilot osteoporosis screening scheme based in one community pharmacy. Telephone interviews with clients (29 low risk from assessment questionnaire; 75 low risk from bone scan; 29 osteoporotic). Unstructured interviews with health professionals (pharmacist, pharmacy assistants, nurse, GPs, pharmaceutical advisors). Face to face interviews with pharmacy users in the target age group (60+ years).

Key findings Most clients were either invited to take part by pharmacy staff (43%) or saw a poster at the pharmacy (35%). Only 2% became aware of the service through posters at the GP surgery. 228

patients completed a Risk Assessment questionnaire, of whom 49 (21%) were found to be low risk. The remainder had a bone scan and 36 were found to be osteoporotic.

Most patients rated pharmacy staff as extremely/very accessible (90%) and professional (83%). Over 90% rated the knowledgeability and clarity of explanation by the nurse conducting the bone scan as extremely/very. The availability of the screening service at a local pharmacy was highly valued (89% giving the top rating). Over three-quarters valued the ability of the pharmacist to prescribe medication without having to visit the doctor. Three-quarters thought the pharmacy setting was more convenient than their doctor's surgery although only just over a half said this would make them more likely to use the service. Most said they would use the screening programme again and would recommend it to others. 80% of patients felt they were treated with complete privacy and confidentiality, with 18% reporting 'a degree' of privacy and confidentiality and 2% not being treated with any privacy and confidentiality. When asked to state any perceived disadvantages, 5% said lack of space, 4% problems with the shop environment and 2% no proper waiting room. 1% said that doctors were more knowledgeable. Commitment and enthusiasm of those involved was found to be a significant factor and the authors say it should be 'an important consideration in the selection of pharmacies involved in any future scheme'.

Title, authors, source type, year and evidence grading McGovern EM, Tennant S & Mackay C.

Audit of returned medicines to community pharmacies. Royal Pharmaceutical Society of Great Britain Local Health Care Cooperative Conference (2001). **C1**

Objectives To assess the quantities and types of medicines returned to community pharmacies.

Study design For four weeks 10 community pharmacies recorded all medicines returned excluding those dispensed more than 12 months earlier and over the counter medicines. Data

recorded included the name of the medicine, quantity returned, reason for return and originating GP practice. The cost of each returned item was calculated.

Key findings Over the four week period, 256 items with a value of £2411 were returned by 100 patients. The median number of returned items was 2 (range 1–17). The main reasons for return of medicines were because therapy had been altered (54% of patients) or the patient had died (16% of patients). Eleven patients (11%) returned 13 items because of an adverse reaction. The main

therapeutic category was cardiovascular (76 items, 30%). The authors report there was evidence of excessive quantities having been prescribed. Three pharmacies and two general practitioner surgeries

accounted for 61% and 68% of the returns respectively. The results were discussed locally and the authors report that some changes to prescribing frequency were agreed.

Factors affecting the effectiveness of community pharmacy-based activities to improve health

Title, authors, source type, year and evidence grading Aston University/MEL Research. Consumer expectations of community pharmaceutical services. Report to the Department of Health (1991). **B3**

Objectives To determine consumer views of health information leaflets.

Study design Self-completion postal questionnaire.

Consumers were asked if they had noticed any written material (leaflets or booklets) available free of charge at their pharmacy; if so, whether they had taken any away; if so, whether they had found the material useful.

Sampling and response rate 224 respondents.

Key findings Nearly two-thirds of 'high users' of pharmacies had noticed leaflets and 37% had both noticed leaflets and taken them away to read. For the 'general population' 48% had noticed leaflets and 23% had noticed them and taken them away. 13% of high users had seen and taken leaflets and rated them as very useful compared with 5% of the general population. Customers in younger

(under 30 years and 30–44 years) age groups were more likely to have seen leaflets (70%). However, these groups were less likely to have taken away and read leaflets. In the 'retired' group, 40% had seen them and 20% reported taking leaflets. Men and women were equally likely to have noticed leaflets but women were more likely to have taken them away and read them.

Over a quarter of respondents reported difficulty in identifying the pharmacist and a similar proportion believe 'the pharmacist prefers to keep out of sight'.

'Two-thirds of respondents would like to be able to talk to the pharmacist in private, while only 5% had found and used such facilities to date'.

Leaflets passively displayed were missed by nearly half the consumers.

The authors concluded 'There are still many people who are unaware of the pharmacist's role as an adviser on general health matters'.

Other comments The authors comment that elderly people were less likely to notice leaflets and to take them away.

Title, authors, source type, year and evidence grading Coggans N, Johnson L, McKellar S, Grant L & Parr RM

Health promotion in community pharmacy: perceptions and expectations of consumers and health professionals. Department of Pharmaceutical Sciences, University of Strathclyde Report commissioned by the Scottish Office (June 2000). **C1**

Objectives The aims were to identify:

- (1) the aspects of health promotion to which pharmacy customers were most receptive;
- (2) what methods are appropriate for delivery of pharmacy health promotion.

Study design Semi-structured interviews with 601 pharmacy customers; 30 pharmacists; 30 pharmacy assistants. Interviews were taped and transcribed. Setting: five health board areas in Scotland. Delphi panel of 24 stakeholders in community health promotion for consensus on how and in what ways community pharmacy can contribute to the health of pharmacy customers.

Sampling and response rate Twenty customers were interviewed in each of 30 participating pharmacies. Customers were approached when they had completed their transaction (or sometimes while waiting for their prescription to be dispensed). No refusal rate stated.

Authors comment that the sample included a higher proportion of women, older people and professional people than the general population.

Key findings Of the customers interviewed, 37% had visited a pharmacy at least once a week, 17% at least once a fortnight, and 32% at least once a month. Women reported visiting pharmacies more often than men. 86% were willing to discuss their prescribed medicine with the pharmacist if they were having problems. 84% were willing to seek pharmacy advice about minor health problems. Less than one-third (32%) were willing to seek advice on healthy eating in the pharmacy. 22% said that either they did not see this as part of the role of community pharmacy or that it had not occurred to them that pharmacies could provide such advice. Among smokers who could be considered to be contemplating quitting, 66% felt positive about obtaining advice on smoking cessation in the pharmacy. One-fifth (20%) were willing to seek advice about exercise from the pharmacy.

When asked about willingness to get help on a sensitive or personal problem in the pharmacy, 33% said yes and 52% said no. The pharmacy was perceived to provide adequate privacy for discussion of sensitive topics by 18% of customers, with 68% saying no. 68% believed their discussions in the pharmacy would be confidential, the remainder giving negative or uncertain responses. Women were significantly more likely than men to say that they would discuss a sensitive subject and that confidentiality would be maintained. Leaflets were seen by customers as a principal source of information with 70% saying they

obtained information this way. Pharmacists perceived sun protection, prescribed medicines and smoking cessation as being the health topics most acceptable to the public for pharmacy involvement. Diet, exercise and 'sensitive topics' were seen as much less acceptable. Pharmacists were 'willing and eager' to discuss a range of health issues with customers, although there was some reluctance in relation to lifestyle issues as well as awareness of privacy as an issue.

The Delphi group rated priority targets:

1. Increase the proportion of customers who perceive there to be enough privacy in the pharmacy to discuss something sensitive or personal.
2. Increase the proportion of pharmacy customers who believe that all discussions with pharmacists are treated as confidential.
3. Increase public willingness to use community pharmacy for smoking cessation.
4. Increase the proportion of customers willing to discuss any problems with their prescribed medicines with the pharmacist.
5. Maximise the availability and potential of health education leaflets.

Increasing public willingness to use pharmacies for advice on healthy eating and exercise were ranked sixth and eighth respectively.

Other comments The authors comment that: (1) the findings indicate a widespread perception that community pharmacy does not provide sufficient privacy for discussion of sensitive topics; (2) there is a need to reassure the public about confidentiality being part of pharmacy's professional ethos.

Title, authors, source type, year and evidence grading Shafford A & Sharpe K.

The pharmacist as a health educator. Research Report 24, Health Education Authority (1989). **B3**

Objectives To study the perceived and actual needs of community pharmacists in order to develop their role as health educators.

Study design Self-completion postal survey. Pro forma diary of health enquiries.

Sampling and response rate Survey sent to all community pharmacists in North East Thames Regional Health Authority (897). Response rate: 58% after two reminders. Comparison of

pharmacy ownership type of responders with regional data showed a similar profile. Pro forma diary of health enquiries completed by self-selected sub-sample. The profile of pharmacy ownership type was similar to regional profile.

Key findings Of the survey respondents, 61.7% reported having a suitable area or room for confidential discussions. One in four pharmacies had a consultation room. 74% reported that their undergraduate education gave them 'no' or 'poor' training in advice-giving on health education topics and 48% said this about their pre-registration training.

45% reported displaying health education leaflets and 56% believed leaflets to be of 'great' or 'very great' importance. Advice-giving was reported as of 'great importance' on prescribed medicines by 52% of respondents; over the counter medicines by 45% and health education by 18%. Pro forma diaries of health enquiries showed that 3% of recorded enquiries were on general health queries. The busiest time of day for these enquiries coincided with the busiest time for dispensing. The

time taken to deal with general health queries was longer than that for symptom, OTC or dispensed medicine queries.

The authors concluded that 'at present, the general public do not see the pharmacist as a general source of health information' and that 'it is important to educate and encourage the general public to use the community pharmacist as a source of general health information'.

Title, authors, source type, year and evidence grading

Hariri, S.

Multimedia health promotion in community pharmacy. PhD thesis Department of Pharmacy, King's College, London (1998). **C1**

Objectives To investigate the usability of multimedia touch screen kiosks as tools for health promotion within the community pharmacy setting; to examine the effect of such a kiosk on the public's use of their community pharmacy as a source of health information.

Study design A touch screen multimedia kiosk with the CardioPharm program was installed initially in three community pharmacies (study 1) and subsequently in three supermarket pharmacies (study 2). Data were collected as users accessed the software. Observation was conducted in the pharmacies (study 1). Interviews were conducted with the pharmacists (study 1). Users in the three supermarket pharmacies were asked to complete a questionnaire.

Sampling and response rate Questionnaire response rate not known.

Key findings The total numbers of user

interactions were 847 in study 1 and 11,590 in study 2. The completion rates were 31% and 37% respectively. Most users in both studies were aged below 40 and had a healthy Body Mass Index (BMI) of 25 or less.

There was a significant increase in the health promotion activity of the pharmacies including more queries to the pharmacist and higher numbers of leaflets taken. Observation indicated that some older customers required encouragement and a demonstration by pharmacy staff before they used the kiosk.

154 users completed the questionnaire in study 2. Most agreed that touch screen systems were a good method of providing information to the public. The majority agreed that the pharmacy was an appropriate environment for information kiosks. None of the users reported having asked pharmacy staff for information or advice.

Other comments Most customers who accessed the software were in younger age groups. The reasons for the low completion rate are not known. Consideration needs to be given to how to engage older customers in use of such systems.

Stakeholder views

Title, authors, source type, year and evidence grading

BMRB International

Baseline mapping study to define access to and usage of community pharmacy. Report commissioned by Royal Pharmaceutical Society of Great Britain (March 1996). **B3**

Objectives To determine who uses what type of pharmacy, when, for what (prescription medicine

related, over the counter medicine related, healthy lifestyles) and in what locations.

Study design Face-to-face, in-home structured interviews with 517 adults aged 16 years or over. Inclusion criterion was that respondents had used a pharmacy for at least one of the core components in the past year, either for themselves or for someone else.

Sampling and response rate Random Location Sampling was used, using Enumeration Districts as sampling points, with quota sampling.

Key findings Of those sampled, 94% were found to have used a pharmacy in the last year for one of the three core reasons. On average pharmacies were used once a month, with women and respondents with children under five years more frequent users. Other frequent users were those in inner cities and 'striving' ACORN (A Classification of Residential Neighbourhoods) type. Least

frequent users were 16- to 24-year-olds and 'expanding' ACORN type. Usage levels were: 90% prescriptions; 30% seeking advice on specific symptoms/problems; 10% seeking general health advice. 16- to 24-year-olds had a 'particularly low' usage for general health advice. Usage for this reason was higher among women, respondents with young children and C2DEs. Unsolicited health related advice was reported by 14% of respondents. Over half (53%) of the people receiving this advice received it twice or more often.

Title, authors, source type, year and evidence grading Hassell K, Rogers A, Noyce P & Nicolaas G The public's use of community pharmacies as a primary health care resource. Report to the Community Pharmacy Research Consortium (November 1998). **B3**

Objectives To map and describe what is currently known about how the public use pharmacies. To provide retrospective and prospective data on pharmacy usage in the context of how other primary and secondary resources are used. To explore what influences the choice of primary care service provider.

Study design Review of published literature. Secondary analysis of general population household survey and health diary data. Linked qualitative study of interviews with users and non-

users of community pharmacies.

Sampling and response rate Survey of health status and health care use by 834 residents in 346 households. Sample drawn from three areas (urban, suburban, market town/semi-rural). Screening was used and frequent health service users were over-sampled. Health diaries completed by 549 people in 215 households. Interviews with sub-sample of 41 diary respondents.

Key findings Frequency of pharmacy use was high, mainly restricted to the prescription service. Most people self-managed their conditions, with 5.5% using the community pharmacy for advice. The pharmacist's profile was perceived as 'that of a drug expert – advising on medicines not illness'.

Title, authors, source type, year and evidence grading Anderson C. Health promotion by community pharmacists. PhD thesis, King's College, London (1997). **B3**

Objectives To investigate the effect of a training programme on the role of community pharmacists in health promotion; to investigate consumers' perceptions of the community pharmacist's role

Study design Interviews with pharmacists in the Barnet High Street Health (HSH) scheme (who had participated in the training programme) and a 'control' area. Covert study of pharmacists' advice on smoking cessation in 20 HSH pharmacies and 20 controls. Consumer survey using questionnaire administered in six HSH pharmacies. Telephone survey of health authority pharmaceutical advisers in England.

Sampling and response rate Ten HSH scheme pharmacists and ten 'controls' were interviewed. 592 consumers took part in six participating pharmacies in the HSH scheme.

Key findings Interview data showed that the HSH pharmacists were more actively involved in health promotion and had a more holistic view of health. They perceived different barriers to implementing the health promotion role. Pharmacists who received training had increased knowledge of health promotion, they expressed a desire to spend less time dispensing prescriptions and more time advising customers. The covert research showed that HSH pharmacists spent significantly longer in the consultation on smoking cessation and used leaflets more appropriately.

Consumers believed that the doctor was the best and most convenient person to go to for advice about staying healthy. 40% of consumers believed that it was the 'usual job' of the pharmacist to advise on staying healthy but only 15% had ever

asked for such advice.

The telephone survey data showed that 57% of health authorities reported at least some health promotion activity.

Title, authors, source type, year and evidence grading

Anonymous.

The Pharmacy Healthcare Scheme (Qualitative study). Health Education Authority. Research Report (1993). **B3**

Objectives To examine the overall work of the Pharmacy Healthcare Scheme from the pharmacist's perspective; to look at the role of the pharmacist in health promotion.

Study design Qualitative interview study conducted in parallel with quantitative survey.

Sampling and response rate Letter of invitation sent to 180 community pharmacies in England (including London), Scotland and Wales. Half were multiples and half independents. Half were 'in town' and half 'out of town'. 21% (39) of pharmacists agreed to be interviewed, 24% declined and 55% did not reply. London had an 11% agreement rate and Edinburgh 50%. Of the 39 interviewees 17 were from independents and 22 from multiples.

Key findings The approximate time split between dispensing / responding to symptoms and admin/paperwork was 70/30%. None of the pharmacists identified a specific time allocation for

health promotion. The report states that 5% of overall time (within dispensing / responding to symptoms) was spent on health promotion. Although pharmacists perceived health promotion as important the researchers noted that: 'pharmacists' health promotion role is reactive not proactive'; 'the pharmacist's role is very much orientated towards medical advice, health promotion happens during this process'; 'advice is provided to the public on request as pharmacists do not provide health promotion advice directly' and 'the pharmacist's health promotion role is developing – moving away from pure dispensing. 'A sizeable number' of pharmacists believed that the public do not recognise the extent of their training and skills and see them as shopkeepers, not health educators. Pharmacists reported being isolated from the primary health care team, with no structured or formal communication channels and little collaborative work.

Other comments The report recommended national publicity to raise public awareness of the pharmacist's role in health promotion. Research on the public's perceptions of pharmacy was also recommended.

Title, authors, source type, year and evidence grading

Health Promotion Authority Wales. Pharmacy Health Care Scheme survey (Wales). Report.. Health Promotion Authority Wales & Welsh School of Pharmacy (1991). **B3**

Objectives Determine levels of health promoting activities by community pharmacists in Wales; to identify practical measures to increase involvement.

Study design Self-completion postal questionnaire.

Sampling and response rate 1081 pharmacists in Wales (all practising pharmacists registered since 1940). Response rate: 67% (724) after two

reminders. The authors state that 522 pharmacy premises were represented in the survey returns. Comparison of years registered, gender and employment status for responders, late responders and non-responders showed similar profiles. In statistical analysis $P < 0.001$ assigned as significant.

Key findings Only 13.5% rated health promotion as being of 'little' or 'no' importance. Figures for specific services/ activities were: pregnancy testing 310; weight measurement 156; sale of needles/syringes 151; blood pressure measurement 80; needle / syringe exchange 40; cholesterol testing 16; lung function testing 7. 106 and 118 respondents reported planning to introduce blood pressure and cholesterol measurement respectively.

Barriers to health promotion activities were reported as: finance 54%; public apathy (34%); professional relationships with GPs (31%) and lack of knowledge (22%) .

Other comments Commentary notes that

'Pharmaceutical Care: the future for community pharmacy' recommended that diagnostic and screening services should be provided by community pharmacies and discusses this aspect.

Title, authors, source type, year and evidence grading BMRB

Pharmacy Healthcare scheme (Quantitative study). Health Education Authority. Report (1993). **B3**

Objectives Examine how pharmacists view their role in health promotion and health education; to obtain pharmacists' views as users of the Pharmacy Healthcare Scheme on its effectiveness.

Study design Pre-piloted postal questionnaire.

Sampling and response rate A total of 1986 community pharmacies were sampled from London, rest of England, Scotland, Wales and Northern Ireland. Response rate: 67% after one reminder. A higher percentage (91%) of Boots pharmacists replied cf. 64% of others. At analysis, data were weighted to the profile of the original sample to correct for differing response rates.

Key findings Of respondents, 45% worked for independents and 18% at multiples with 50

branches. Most pharmacists reported that Pharmacy Healthcare Scheme leaflets were left to be picked up by customers with only a small number of leaflets taken on the pharmacist's recommendation. The researchers note that 'there is clearly a desire amongst many pharmacists to become more involved in the area of health promotion and education'. 77% reported spending one, two or three hours a week on health promotion and most said this was increasing. 84% reported insufficient financial incentives and 66% insufficient time for health promotion. Pharmacists were also 'keen for the public to be better educated about the role of pharmacists in health care in general'.

Other comments Pharmacists ranked the relative importance of pharmacists being able to give informed advice on specific topics as: smoking 54%; diet/nutrition 37%; family planning 21%; exercise 14%; drinking 13%.

Title, authors, source type, year and evidence grading Dewsbury-Mason C

Community pharmacists and health promotion training, activities and attitudes. MSc thesis, University of Kent (1998). **B3**

Study design Cross-sectional survey. Questionnaire to 100 community pharmacists in one UK area.

Sampling and response rate Response rate: 66%.

Key findings A holistic view of health was not predominant among community pharmacists and only 5% identified health as 'an absence of illness'. 86% of pharmacists said they would be willing to undertake further training in health promotion. Just over half (53%) had undertaken some training in health promotion. Time, remuneration and premises were seen as the main barriers to involvement in health promotion.

Title, authors, source type, year and evidence grading Elliott J.

The role of community pharmacists in relation to the primary health care team. Report commissioned by the Health Education Authority (1996). **B3**

Objectives Identify a sample of community pharmacists working with the primary health care

team; areas of collaboration; the extent to which the focus of collaboration involved health promotion; identify barriers to team working.

Study design Postal survey of pharmacists Interviews with health authority pharmaceutical advisers (3), local pharmaceutical committee secretaries (3), community pharmacists (15), primary care team members (9).

Sampling and response rate Questionnaire sent to 373 community pharmacists in three areas (Cumbria, Liverpool, Northamptonshire). Response rate: 78% (290) after one reminder. Semi-structured interviews with sample of 15 community pharmacists (self-reported collaboration with primary care team in questionnaire) and other health professionals (9 of 16 agreed to be interviewed) identified by the sub-sample of community pharmacists as working with them.

Key findings Regular meetings with primary health care team reported by 14% of survey respondents. Collaboration on projects or initiatives reported by 13%. Collaboration focused on prescribing and medicines. Pharmacists dispensing higher prescription numbers were more likely to report collaboration. Barriers to collaboration were: lack of time; lack of funding; lack of opportunity to meet other health professionals; perception that pharmacist's input

not wanted. Seven of 18 pharmacists who made additional comments said they 'had not been asked' to collaborate. Close proximity to the GP practice with no other pharmacies nearby was associated with collaboration.

Interview data suggested that survey results overestimated the amount of collaboration and teamwork (10 of 15 pharmacists self-reporting collaborative work were doing so, the remainder were minimal or intermittent).

Interviews with pharmaceutical advisers identified local initiatives organised by health authorities. However, these were 'for limited time periods, with limited funding and inadequate evaluation' and generally involved an enthusiastic minority of pharmacists.

Other comments One-third (32%) of pharmacists reported that most of their prescriptions came from one GP practice; 19% from two; 21% from three to four; and 29% from more than four.

Title, authors, source type, year and evidence grading Scott K.

Involvement of community pharmacists in Health Education Authority (HEA) primary health care team workshops – Report on qualitative evaluation. Report for HEA (1994). **B3**

Objectives To explore: community pharmacists' perceptions of their role within primary care; primary health care team PHCT workers' perceptions of the community pharmacist; the nature and extent of working relationships; initial and longer term impact of pharmacist involvement in PHCT workshops.

Study design Nine practice teams were involved. Pre-workshop interviews with eight pharmacists and 36 PHCT members. Interviews one week post-workshop with eight pharmacists and 32 PHCT members. Unclear how PHCT members were selected. Three months post-workshop, group interview with eight pharmacists and postal questionnaire to PHCT members (21 respondents).

Sampling and response rate Response rates: 100% stage 1; 90% stage 2; 72% stage 3.

Key findings Community pharmacists were rarely mentioned spontaneously as part of the PHCT.

Although PHCT members expressed confidence in individual pharmacists they often expressed concerns about community pharmacy in general in relation to possible wider roles. The main concerns were about pharmacists' lack of access to patients' full medical history and about potential conflicts arising from commercial activities. Nevertheless most PHCT members (particularly GPs, practice managers, practice nurses and district nurses) welcomed the idea of greater involvement of community pharmacists.

While the community pharmacists were pleased to be invited to attend the workshop they also expressed anxieties about what they would be able to contribute and about how their participation would be received by PHCT members. Three months after the workshop there was evidence of greater contact (pharmacists invited to practice meetings by most practices) and a number of joint activities (e.g. referral of diabetic patients to the pharmacy by the diabetic nurse and vice versa; joint GP/pharmacist asthma session for school nurses). Both pharmacists and practices reported difficulties in pharmacists being able to leave their premises to attend practice meetings.

What role, if any, should pharmacies play in improving the health and well-being of the general public? Situated, as they often are, at the heart of their communities, they are in a unique position to provide help and advice on health matters to a complete cross-section of society at the same time as dispensing medicines. But is there any evidence that customers would actually benefit from such advice?

Bringing together, summarising and categorising research papers on such diverse topics as stopping smoking, lipid management and drug misuse, this report provides strong evidence that pharmacies can indeed make a positive contribution to improving the health of the nation – a finding that supports the recommendation of the recent Health Committee Inquiry into Public Health that ‘community pharmacists play a more active role in public health’.

By adopting some of the activities described, pharmacies across the country will not only be aiding the treatment of disease they will be improving the health of their customers at the same time. This report will make interesting reading for all those concerned with meeting health improvement targets, planning future services and integrating community pharmacy activity with that of the wider NHS.

