

Evaluation of the NHS Direct Essex pharmacy pilot scheme

An independent research study carried out by the Medical Care Research Unit of the University of Sheffield, on behalf of the Department of Health. The views expressed are those of the authors and not necessarily those of the Department of Health.

James Munro, Alicia O’Cathain, Emma Knowles, Jon Nicholl

with the assistance of April Dagnall

Medical Care Research Unit
University of Sheffield
Regent Court
30 Regent Street
Sheffield
S1 4DA

September 2001

© 2001 Medical Care Research Unit (MCRU), University of Sheffield

ISBN: 1 900750 11 2

Published by the Medical Care Research Unit (MCRU), University of Sheffield

Table of contents

1. EXECUTIVE SUMMARY	1
2. INTRODUCTION.....	3
3. RESEARCH AIMS	6
4. USE OF THE PHARMACY DISPOSITION	7
5. THE ADDED BENEFIT OF THE PHARMACY SCHEME TO CALLERS.....	12
6. EXPERIENCES OF CALLERS ADVISED TO SEE A PHARMACIST	22
7. NHS DIRECT CALLS IN WHICH A PHARMACY VISIT IS DISCUSSED.....	29
8. VIEWS OF PHARMACISTS	34
9. THE VIEWS OF NHS DIRECT NURSES	40
10. CONCLUSIONS.....	44
11. ACKNOWLEDGEMENTS	48
12. APPENDIX: COMMENTS OF RESPONDENTS TO THE CALLER SURVEYS	48
13. REFERENCES.....	52

Index of tables

Table 4-1: Disposition of calls before and after pilot scheme	9
Table 4-2: Characteristics of pharmacy patients: age and sex	9
Table 4-3: Characteristics of pharmacy calls: time and weekday	10
Table 5-1: Response rates to 'before' and 'after' surveys	15
Table 5-2: Comparison of 'before' and 'after' survey respondents	16
Table 5-3: Advice reported by callers before and after the pharmacy disposition	16
Table 5-4: Advice reported by callers during each month of the study	17
Table 5-5: Callers' views of the helpfulness of advice given by NHS Direct	17
Table 5-6: Callers answering 'much better/much more' to enablement questions	18
Table 5-7: Caller satisfaction	19
Table 5-8: Contacts with other services	19
Table 6-1: Advice reported by respondents to the 'top-up' survey	23
Table 6-2: Callers' views on the appropriateness of advice to contact a pharmacist and whether they followed that advice	23
Table 6-3: Caller action, by view of appropriateness	24
Table 6-4: Satisfaction levels with different aspects of attending the pharmacy	26
Table 8-1: Characteristics of respondents	34
Table 8-2: Pharmacists' views of NHS Direct	35
Table 8-3: Pharmacists' views of the scheme before it began	35
Table 8-4: Pharmacists' impressions of the scheme in operation	36
Table 8-5: Pharmacists with a referral v pharmacists without a referral	36
Table 8-6: Views on NHS Direct kiosks	38
Table 12-1: Written comments on NHS Direct before and after the scheme	49

1. EXECUTIVE SUMMARY

NHS Direct, the national 24-hour nurse-led telephone advice line, was established in three pilot sites in 1998 and became available to the whole of England and Wales during 2000, with a Scottish version beginning in Spring 2002. Callers to the service are advised by a nurse, using a computerised decision support system, to attend a casualty department, contact their GP or undertake self-care. Callers with urgent and serious problems may be diverted to the 999 emergency service.

In 1999 Essex NHS Direct with the Essex Local Pharmaceutical Committees, and the support of the National Pharmaceutical Association (NPA) and the Royal Pharmaceutical Society, proposed that NHS Direct should pilot an additional triage endpoint of referral to the pharmacist for advice, assessment and treatment as appropriate. Accordingly, review of the computerised protocols in use was undertaken by Keele University and, following a period of training for nurses and pharmacists, a pilot of the new system was introduced in Essex NHS Direct in March 2000.

The objectives of the current study were to describe the activity of the pilot scheme, in terms of the use of the pharmacy disposition, and to explore the perspectives of callers, nurses and pharmacists. The research methods included analysis of routine call data and anonymised call transcripts, postal surveys of callers and pharmacists, and face to face interviews with NHS Direct nurses.

During the first three months of the pilot project about 6% of calls were logged as disposed to pharmacists. In general, callers who were advised to contact a pharmacist found the experience a positive one: 86% felt this advice was very or quite appropriate, 75% attempted to contact a pharmacist, and for most of these the pharmacist was less than ten minutes away. Not all who visited a pharmacy spoke to the pharmacist, but 80% of those who did expressed satisfaction with the advice offered, although the lack of privacy in the pharmacy was of some concern. Overall, our evaluation showed no measurable change in caller satisfaction during this period.

The evaluation also revealed clear evidence of a willingness on the part of both NHS Direct nurses and community pharmacists to see a greater role for pharmacy in the system of first contact care in principle, although there were reservations over how this should operate in practice.

In addition, the evaluation identified some particular difficulties in the implementation of the pharmacy pilot scheme in Essex. Overall, the scheme was only partially implemented, with initial enthusiasm and use of the pharmacy referral in accordance with the prompts of the decision support system giving way to a falling use of the pharmacy disposition over time, despite the prompts of the system.

A number of factors contributed to the difficulties in implementation: the nurses felt they should have been involved with revising the decision support system, and found

some of the guidelines inappropriate or lacking in a clear rationale for the advice to visit a pharmacist; there was nurse uncertainty over the role of community pharmacists, and a lack of clarity over when a visit to a pharmacist was advised as an alternative to a GP contact rather than as being in addition to self-care; and in cases where the pharmacy visit was additional to self-care, a concern on the part of nurses to balance the potential benefits of any visit against the degree of inconvenience or cost entailed for the patient.

The evaluation of the pilot scheme has generated a range of recommendations for the wider national roll-out of the scheme, including:

- revision of the triage software protocols for referral to pharmacy, to ensure involvement of NHS Direct nurses alongside pharmacists in the revision team, and provision of a rationale for the advice to visit a pharmacist, for both nurse and caller;
- review of NHS Direct nurse training, in the light of identified nurse concerns and uncertainties, and consideration of how newly recruited nurses receive training on the pharmacy scheme and the skills and roles of community pharmacists;
- ensuring a specific focus on pharmacist referral and the involvement of pharmacists in clinical audit activities in NHS Direct;
- consideration as to how to strengthen the system of pharmacist feedback to NHS Direct;
- revision of the software system to ensure that the actual advice given to the caller can be accurately logged.

2. INTRODUCTION

2.1 Policy background

NHS Direct, the national nurse-led telephone helpline, was announced in the white paper *The New NHS: modern, dependable* in December 1997,¹ following one of the recommendations made in the Chief Medical Officer's report *Developing Emergency Services in the Community*, published 3 months earlier.² The white paper indicated that the purpose of the new service would be to provide "easier and faster advice and information for people about health, illness and the NHS so that they are better able to care for themselves and their families". In addition, the Chief Medical Officer's report had expressed the hope that such a service might help to "reduce or limit the demand" on existing immediate care services.

The specific objectives set by the Department of Health for NHS Direct include:

- to offer the public a confidential, reliable and consistent source of professional advice on healthcare, 24 hours a day, so that they can manage many of their problems at home or know where to turn to for appropriate care;
- to provide simple and speedy access to a comprehensive and up to date range of health and related information;
- to help improve quality, increase cost-effectiveness and reduce unnecessary demands on other NHS services by providing a more appropriate response to the needs of the public; and
- to allow professionals to develop their role in enabling patients to be partners in self-care, and help them to focus on those patients for whom their skills are most needed.

The development of NHS Direct since the initial policy commitment was rapid, and by November 2000 the telephone service was available to the entire population of England and Wales. A similar service for Scotland, NHS 24, was announced in December 2000 and is expected to become operational in Spring 2002.³

2.2 Evaluation to date

A number of evaluations of NHS Direct have been published, including three progress reports from the Medical Care Research Unit.^{4 5 6} Broadly, this research has shown that NHS Direct is a popular and well-used service which callers find friendly, helpful, prompt and reassuring.⁷ Call rates run at about one-third the level of out-of-hours general practice, and the pattern of use of is characterised predominantly as an out-of-hours service, with relatively high call rates for young children and young women, and lower than expected call rates for older adults. The great majority of callers are

seeking advice on the immediate management of a wide range of mainly minor illnesses and injuries.

However, not all callers have been happy with the service. Important sources of dissatisfaction have included difficulties in getting through to the service or delays in being able to speak to a nurse,⁸ or the number of questions asked.⁴ Anecdotal media reports,⁹ and very limited evidence from the Consumers' Association,¹⁰ have raised questions about the quality and consistency of self-care advice, although the methodology of the Consumers' Association study has been criticised for providing no comparison with the quality of advice offered by other health care professionals.¹¹ Nonetheless, there is currently little or no evidence available on the quality of self-care advice.

There is some evidence to suggest that the introduction of NHS Direct was associated with halting an upward trend in demand for out-of-hours general practice, but has had no measurable impact on overall demand for ambulance or accident and emergency services.¹² The evidence available also suggests that serious adverse clinical outcomes associated with NHS Direct are likely to be rare.⁶

2.3 The NHS Direct pilot pharmacy scheme

The initial implementation of NHS Direct, in all sites, centred on calls for advice being directed to a nurse who would triage the call using computer decision support software. Although the software in use varied from one site to another, all systems shared the primary triage endpoints of diversion to the 999 emergency service, advice to attend an A&E department, to contact a GP or to care for the problem at home.

In mid-1999 Essex NHS Direct with the Essex Local Pharmaceutical Committees, and the support of the National Pharmaceutical Association (NPA) and the Royal Pharmaceutical Society, proposed to the NHS Executive that the role of community pharmacists in relation to NHS Direct should be further explored. In particular, it was proposed that NHS Direct should pilot an additional triage endpoint of referral to a pharmacist for advice, assessment and treatment as appropriate.

The NHS Executive accepted this proposal and Essex NHS Direct agreed to establish a pilot scheme in which a triage endpoint of referral to a community pharmacist would be added to the existing range of triage outcomes. In support of this, a team from the Department of Medicines Management at Keele University was commissioned to review the computer protocols in use in the Centramax system then operational in Essex. This review was completed in September 1999 and identified a 'substantial opportunity for introducing a fourth disposition [i.e. pharmacy] to the Essex NHS Direct pilot'.¹³

The review team's working definition of the circumstances appropriate for community pharmacy referral were:

- that appropriate treatment is a medicine that is only available from a pharmacy, or significant additional advice would be available from a pharmacist;
- that there is a low clinical risk associated with a pharmacy referral;
- and that the condition is routinely dealt with by a pharmacist.

In all, 182 opportunities for a referral to pharmacy were identified in 68 of the Centramax guidelines. The review team felt that no particular “out of hours” issues were raised by the scheme, since by definition none of the conditions for which callers might be referred to pharmacy would in any case require medical attention within 72 hours.

Accordingly, the decision support system in Essex was modified and briefing sessions were provided for NHS Direct nurses and local community pharmacists to explain how the pilot scheme would operate. The new system was introduced in March 2000, with the aims of further integrating NHS Direct with other immediate care services and appropriately, safely and conveniently meeting the needs of callers. Previous research into how and why patients choose to seek advice from pharmacists suggested that this development might prove both acceptable and helpful to patients.^{14 15 16 17}

In July 2000, this policy direction was further underlined in the NHS Plan, which promised that by 2002, “NHS Direct will refer people, where appropriate, to help from their local pharmacy” (paragraph 12.5).¹⁸

This increased role for community pharmacy in providing care and advice was confirmed in *Pharmacy in the Future* in September 2000,¹⁹ which stated:

NHS Direct has opened up a convenient new way in which patients can access NHS services. In future, community pharmacies and NHS Direct will work side by side. By 2002, all NHS Direct sites nationally will be able to refer callers to their local pharmacy where appropriate. (para 2.4)

3. RESEARCH AIMS

In January 2000 the Medical Care Research Unit at the University of Sheffield was commissioned to undertake an evaluation of the Essex pilot scheme. The aim of the research was to evaluate the effects of adding the pharmacy disposition to the existing range of advice offered by NHS Direct, in terms of callers' experience of and satisfaction with the service, the impact on pharmacies and the effects on other services which NHS Direct advises callers to use.

3.1 Objectives

The specific objectives of the study were:

- to describe the activity of the Essex pilot scheme, quantifying the pattern of disposals to pharmacists by time, caller characteristics and problems presented;
- to describe in some detail the characteristics of problems presented by callers who are subsequently advised to seek pharmacist advice;
- to determine the action taken by such callers, in terms of whether they consulted a pharmacist, the processes and outcomes of the consultation, and their satisfaction with the consultation;
- to determine the satisfaction of callers before and after the introduction of the scheme;
- to assess the impact of the scheme on the workload of pharmacists;
- to estimate, from callers' reported use of services, the impact of the scheme on other NHS immediate care services.

The research undertaken to meet these objectives is described in each of the following chapters.

Ethical approval for the study was sought from Trent Multi-centre Research Ethics Committee and the five local research ethics committees in Essex, Barking and Havering.

4. USE OF THE PHARMACY DISPOSITION

4.1 Introduction

It is self-evident that the introduction of an additional service to which callers may be directed can have an impact only to the extent that it is used in practice. The purpose of the analysis reported in this chapter is therefore simply to characterise the pattern of use of the new pharmacy disposition following its introduction in March 2000, and to set this in the context of the use of pre-existing dispositions.

4.2 Methods

As in our previous reports on NHS Direct, we have used the call logs generated by the triage software in use as the data source for this analysis. We have previously noted some limitations to this data, in particular that a record of the call depends on the call being logged by the call taker, which may not happen for very brief or simple calls. However, in the context of the current study this is unlikely to be a significant issue since our focus is only on calls formally triaged using the software. All such calls will, by definition, have been logged by the software.

At the time of this study Centramax software was in use in Essex. We have noted previously that Centramax may over or under-report the true number of calls depending on the reporting query used, and has a tendency to produce duplicate records in the call log extracts.⁴ This did not seem to be an issue in the data extracts we received.

For the current study we requested data for every call received by Essex NHS Direct from 1 March 1999 (when the site started taking calls) to 31 May 2000 (three months after the introduction of the new scheme). No information which would allow us to identify any individual caller was included in the data extract. The data included all calls to the site, from all three health authorities served.

4.3 Results

After removing duplicates, 143,366 call records were included in the dataset. Of these, a record of the triage disposition was available for 107,833 calls (75%). We believe that those calls without a triage disposition may have been information calls or calls aborted without formal triage.

4.3.1 Overall use of the pharmacy disposition

In the first 3 months following the introduction of the pharmacy disposition in March 2000, 1,995 calls were recorded as having been disposed to this service. This represents 4.5% of the 44,013 logged calls to the site over this period, or 6.3% of the 31674 calls for which a record of triage disposition is available.

4.3.2 Trends in disposition

The total number of calls to Essex NHS Direct by month, and the number for which a pharmacy disposition was recorded, are shown in Figure 4-1, below. Over the three month period shown about 6% of callers were directed to a pharmacist.

Data for the 107,833 calls with a disposition recorded are further broken down in Figure 4-2, to show trends in services to which callers are directed.

Figure 4-1: all calls to Essex NHS Direct

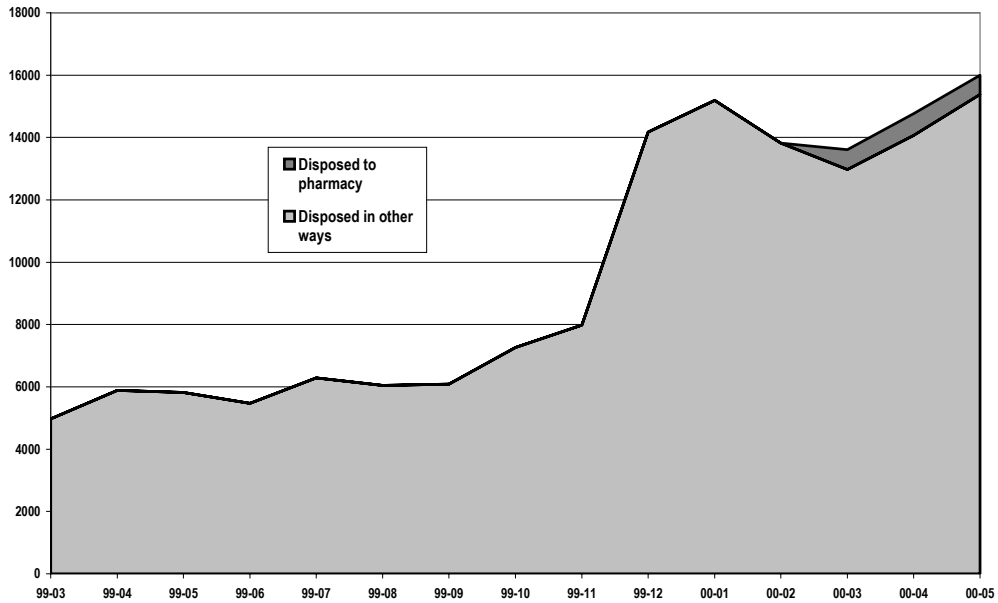
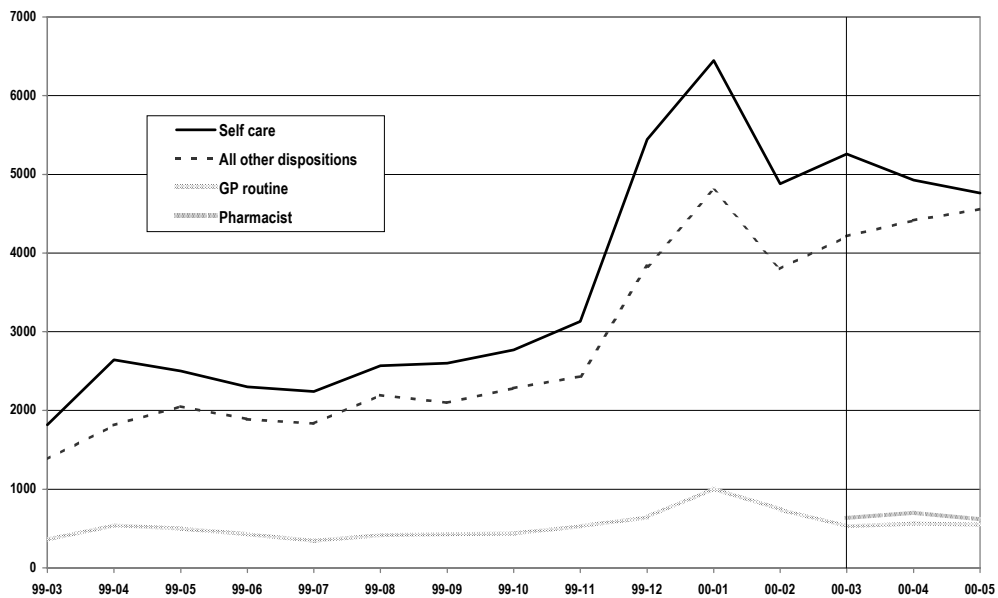


Figure 4-2: Calls by recorded disposition



In Table 4-1, below, the proportion of callers directed to various services is compared for the same 3 month period, to avoid seasonal effects, before and after the scheme. The data show that the proportion of callers directed to “GP routine” fell by about 5 percentage points, and the proportion to “self care” by about 4 percentage points,

while the proportion directed to “GP immediate” rose by 2.6 percentage points. The first two changes might have been expected since by definition the amended protocols in use divert callers from “GP routine” or “self care” to pharmacy. However, these observed changes cannot simply be attributed to the new pharmacy disposition, since we understand that the site also extended its handling of calls for local GP out-of-hours services in May 2000. Nonetheless, the table gives some indication of the size of the effect that the new disposition could potentially have on either self care or GP endpoints.

Table 4-1: Disposition of calls before and after pilot scheme

	March to May 1999		March to May 2000	
	n	% of calls	n	% of calls
Pharmacist	-	-	1955	6.2
A&E	1247	9.2	3130	9.9
GP immediate or within 4 hours	1760	12.9	4906	15.5
GP within 24 hours	1958	14.4	4492	14.2
GP routine	1395	10.3	1641	5.2
Self care	6963	51.2	14946	47.1
Other, inc 999	281	2.1	655	2.1
All calls	13604	100.0	31725	100.0

4.3.3 Characteristics of calls disposed to pharmacy

By definition, callers disposed to pharmacy after the introduction of the scheme would previously have been directed either to self-care or GP care routinely. The tables below compare the characteristics of calls disposed to pharmacy with those of calls disposed to self care or GP routine care, during the first three months of the scheme.

Table 4-2: Characteristics of pharmacy patients: age and sex

Age of patient	Pharmacist		Self care		GP routine	
	n	%	n	%	n	%
0: 9	709	37	5367	38	292	19
10: 19	109	6	1195	8	122	8
20: 29	243	13	1829	13	240	15
30: 39	282	15	2004	14	278	18
40: 49	168	9	1058	7	190	12
50: 59	140	7	963	7	188	12
60: 69	96	5	751	5	104	7
70: 79	100	5	673	5	93	6
80 and over	51	3	335	2	66	4
All calls	1898	100	14175	100	1573	100
Sex of patient						
Female	1102	57	8989	60	1015	62
Male	839	43	5880	40	616	38

All calls	1941	100	14869	100	1631	100
-----------	------	-----	-------	-----	------	-----

Table 4-3: Characteristics of pharmacy calls: time and weekday

Time of day	Pharmacist		Self care		GP routine	
	n	%	n	%	n	%
Midnight to 3:59am	82	4	744	5	76	5
4:00am to 7:59am	121	6	700	5	77	5
8:00am to 11:59am	483	25	3049	20	355	22
Noon to 3:59pm	408	21	3294	22	391	24
4:00pm to 7:59pm	425	22	3633	24	391	24
8:00pm to 11:59pm	429	22	3495	23	351	21
All calls	1948	100	14915	100	1641	100
Day of week						
Monday	287	15	2129	14	240	15
Tuesday	328	17	2361	16	227	14
Wednesday	322	17	2312	16	255	16
Thursday	247	13	2174	15	258	16
Friday	266	14	2044	14	239	15
Saturday	212	11	1646	11	161	10
Sunday	286	15	2249	15	261	16
All calls	1948	100	14915	100	1641	100

The data indicate little difference in the characteristics of calls disposed to pharmacy, compared with those still disposed to self care or GP routine care after the scheme began. In general, the characteristics of pharmacy-disposed callers seem closer to those disposed to self care than to those disposed to GP routine care.

4.4 Conclusions

The routinely available data suggest that, overall, the pharmacy disposition was used in about 6% of calls during the first three months of the scheme. Because of various other time-related effects on call demand and distribution, such as seasonal effects and the introduction of call handling for GP out-of-hours services, the trends presented cannot easily be interpreted to determine whether callers disposed to pharmacy would previously have been disposed mainly to self-care or to GP routine care.

Since the endpoints of each possible algorithm in the Centramax system are known, both before and after the scheme was introduced, it would in principle be possible to identify, from the detail of the system logs, how each individual caller would have been disposed either before or after the scheme. Thus, one could determine from such data what the impact of the scheme on other services might be. However, this would require detailed data from the system which is not currently available, and a

considerable amount of analysis time. It would also require the system logs to provide an accurate account of the advice actually offered to callers.

The focus here is on the simplest level of description. As will become clear, there are good reasons to doubt that, for the pharmacy disposition, the routine data do give an accurate picture of the advice actually given to callers. In the light of this, any more detailed examination of the data seems unwarranted.

5. THE ADDED BENEFIT OF THE PHARMACY SCHEME TO CALLERS

5.1 Introduction

The pharmacy scheme was established with the intention of offering added benefits to callers to NHS Direct, such as:

- speedier access to advice and care than might be obtained from a routine GP appointment;
- advice, assessment and treatment, as appropriate, from a health professional;
- professional support for self care.

Although the term ‘added benefit’ sounds simple and straightforward, it is difficult to define and measure in this context. The term ‘added’ implies that the pharmacy scheme has to give benefit over and above benefits derived from NHS Direct operating without a pharmacy disposition. This suggests a ‘before and after’ aspect to any measurement of benefit. Measurable benefits to callers might include an increase in the perceived helpfulness of advice given by NHS Direct, feeling better able to look after themselves or their health problem (enablement), an increase in satisfaction with NHS Direct, or reduced utilisation of other health services. All of these potential benefits can be measured using callers’ reported experiences and views.

In addition, at the start of the scheme there was concern that callers might be dissatisfied with advice to visit a pharmacist, perhaps seeing it as a diversion away from seeing a doctor. It was therefore important also to measure caller satisfaction to ensure no deterioration associated with the scheme.

The objectives of this element of the research were therefore to determine any changes in helpfulness of advice, enablement, and satisfaction levels of callers to NHS Direct before and after the introduction of the pharmacy scheme; and to estimate, from callers’ reported use of services, the impact of the scheme on other NHS immediate care services.

It should be noted that any benefits of the scheme must, of necessity, be measured across a population of callers, rather than for individual callers. While the “added benefits” of the scheme might be different for callers who would previously have been advised to see a GP or to self-care, the benefit they “would have” received is clearly unmeasurable. Thus, in this study, we compare random samples of callers before and after the scheme.

5.2 **Methods**

5.2.1 The sample

It was clear from the outset that benefits could only occur in the subset of callers who might be advised to visit a pharmacy, i.e. those triaged through one of the 68 guidelines adapted for the scheme, so our intention was to undertake a postal survey only of these callers. We intended to select a random sample of 1500 callers using NHS Direct before the scheme and a further 1500 callers using the service once the scheme had been in operation for at least 3 months. However, only three of the five local ethics committees approved the research in time for us to undertake the 'before' survey. In the event, therefore, our sample included callers from three of the five ethics committee areas only.

In addition, Essex NHS Direct has a policy of asking callers if they agree to participate in research, with the recorded responses being 'yes', 'no' or 'not asked'. We intended to send our questionnaire only to callers who had explicitly agreed to participate in research, but we found that this excluded a considerable proportion of callers, who had not been asked to participate. After some consideration, and in the light of the substantial risks of sampling bias if those who were not asked were excluded, we decided to send questionnaires both to those callers who had explicitly agreed to participate, and also those who were not asked for consent.

5.2.1.1 *The 'before' sample*

We identified all callers to NHS Direct who were triaged through one of 68 guidelines during a four week period (February 2000) prior to the start of the scheme in March 2000. Sampling was restricted to callers from the three areas with local ethics committee approval who had agreed or had not been asked about participation in research. Only 810 callers were identified in this way. The possibility of boosting the sample by selecting callers from January 2000 was not pursued because we felt there would be poor recall of the telephone conversation. Questionnaires were posted first class to sampled callers in the second week of March 2000, with up to two reminders. Staff from the NHS Direct site sent out the questionnaires to maintain confidentiality. Respondents returned the questionnaires directly to the research team in reply-paid envelopes.

5.2.1.2 *The 'after' sample*

We planned to identify similar samples of callers in May 2000 and June 2000, which would supply the required 1500 callers. However only 258, rather than the expected 810, callers could be identified for May, because the Essex NHS Direct nurses had ceased to use the 'not asked' option when asking callers if they wanted to participate in research, coding all callers as either 'yes' or 'no'. We sent out questionnaires to May callers coded as giving a 'yes' response in the second week of June. To

overcome this issue all callers in June and the first two weeks in July were selected, and nurses removed some callers from our list whom they felt should not be sent questionnaires. In all, questionnaires were sent to 1460 callers covering a ten week period when the scheme was in operation (May, June and July 2000). In the 'after' sample we identified 1202 callers in the six week period in June/July, or 200 callers per week, which was similar to the number per week identified in the 'before' sample.

5.2.2 The questionnaire

The questionnaire consisted of questions about the advice received, satisfaction with NHS Direct, enablement, action taken, the details of any subsequent visit to a pharmacy including satisfaction, and demographic details. It was based on questions used in the caller survey of first wave sites.⁷ The same questionnaire was used in both time periods.

In addition, we used the Patient Enablement Instrument to measure the ability of patients to deal with their problems.²⁰ This instrument was developed to measure quality of care in general practice, with a focus on health gain rather than on the processes of care which are usually the focus of patient satisfaction measures. It has been validated for assessing routine general practice consultations but has not been validated for use with NHS Direct callers.

In the present study, callers were asked whether, as a result of their call to NHS Direct, they felt better able to cope with life, to understand the illness/problem they had called about, to cope with the illness/problem, to keep themselves healthy, or felt more confident about their health, or more able to help themselves. Answers of 'much better/much more' scored two points, answers of 'better/more' scored one point and answers of 'same or less' and 'not applicable' scored zero. In total, respondents' scores may range from 0 to 12.²¹ These questions may not be ideal for a telephone consultation, and may not capture fully the reassurance and information which people gain from calling NHS Direct. There is clearly a need for further work to develop a validated enablement tool for use with services such as NHS Direct.

5.2.3 Sample size

The primary outcome was the degree to which the inclusion of the pharmacy disposition in NHS Direct improved the ability of patients to deal with their problems. Given 80% power and a standard 5% significance level, 1005 respondents would be needed in each time period to detect an improvement of half a point in the Patient Enablement Instrument score (standard deviation of 4 points). Assuming a survey response rate of 70%, a sample size of 1500 individuals was needed in each period.

Additionally, given the same assumptions, 1150 individuals in each time period would be sufficient to detect a change from 53% 'very satisfied' with NHS Direct (as observed in first wave sites) to 60% 'very satisfied'.

5.2.4 Ethical approval

Ethical approval was sought from the five ethics committees covering the Essex NHS Direct population. Three committees gave approval in time for the 'before' survey, so only the populations covered by these committees could be included in the study. This accounted for approximately one-third of the population covered by Essex NHS Direct.

5.2.5 Analysis

The primary analysis included all respondents to the questionnaire, and a secondary analysis was undertaken on a subgroup of respondents. The pharmacy disposition substituted for dispositions of 'see a doctor in 72 hours', 'see a doctor in two weeks' or 'home care',¹³ yet respondents to the questionnaire included callers disposed to more urgent services such as 999 or accident and emergency departments. This may be because some callers needed to be upgraded by the nurse. Since it is unlikely that callers disposed to urgent services would be affected by the pharmacy disposition, we selected for further analysis only those respondents recommended to contact a GP in the next few days, to contact a pharmacist or to self care in either time period.

5.3 Results

5.3.1 Response rates

For the 'before' survey, 810 callers were identified. Of the 801 callers who received the questionnaire and who had used the service, 508 usable responses were returned, giving a response rate of 63% (Table 5-1). For the 'after' survey, 1460 callers were identified. Of the 1450 callers who received the questionnaire and who had used the service, 876 usable responses were returned, giving a response rate of 60% (Table 5-1). These figures are lower than the 71% overall response rate obtained for the caller satisfaction survey in first wave sites. However, two of the first wave sites had response rates of 65% and 66% which are similar to those found in this study.

Table 5-1: Response rates to 'before' and 'after' surveys

	Before	After
Total sent	810	1460
Deaths	2	0
Did not use service	5	6
Return to senders	2	4
Eligible	801	1450
Badly completed responses	6	0
Returned late	5	3
Duplicates	0	4
Refusals	45	57
No comment	32	43
Good service	2	1
Poor service	3	2

Did not like survey	3	2
Other	0	3
Usable	508	876

5.3.2 Comparison of respondents in the two time periods

When undertaking 'before and after' studies, it is important to know that the respondents in the two time periods are similar. There were no statistically significant differences between respondents in the two time periods in terms of age of caller, age at which caller left full-time education, gender of caller, prescription status of patient, when the call was made or for whom the call was made (Table 5-2). It should be noted that the characteristics of the respondent population are not comparable with those of the population as a whole, since they are selected by virtue of being NHS Direct callers who have been triaged in a particular way.

Table 5-2: Comparison of 'before' and 'after' survey respondents

	Before		After	
	N	%	N	%
Mean age (sd)	15.7 years	(40.8)	15.2 years	(40.7)
Mean age left full-time education (sd)	17.2 years	(3.42)	17.3 years	(3.72)
Female	506	79	873	77
Patient's prescriptions are free	487	66	832	63
Call made out of hours*	338	79	550	78
Call made about self	507	45	867	47

**weekday evenings/nights and all weekend. Frequent missing values because callers could not remember when they had called.*

5.3.3 Advice received

Before the scheme, 4% of callers reported that they were recommended to contact a pharmacist (Table 5-3), suggesting that the scheme was building on an existing foundation of informal use of disposal to a pharmacist.

There was a statistically significant change in the advice reported by callers in the two time periods (Table 5-3). More callers were recommended to contact a pharmacist or a GP urgently, and fewer to contact a GP in next few days or to self care, in the after period than the before period. These changes are consistent with those expected – that the pharmacy disposition will substitute for the 'GP in the next few days' and 'self care' dispositions. The increase in the reported use of the disposition 'GP urgent' may have been due to an increase in around May 2000 in the numbers of surgeries covered by NHS Direct for their out-of-hours primary care service (personal communication with Essex NHS Direct).

Table 5-3: Advice reported by callers before and after the pharmacy disposition

	Before	After
	%	%

Contact a pharmacist	4	7
999 or A&E	18	18
GP immediately	20	24
GP in 24 hours	19	19
GP in next few days	15	12
Self care	24	19
Total N=100%	487	835

$$\chi^2=12.7, df=5, p=0.026$$

However, these changes were not constant over the sampling period, as Table 5-4 shows. The proportion of callers advised to contact a pharmacist decreased steadily over time as the scheme progressed. The relationship between the percentage of callers advised to contact a GP in next few days or to self care, and the percentage advised to contact a pharmacist, was not constant over time. However, it does appear that the proportion advised to self care fell and then rose as the proportion advised to contact a pharmacist rose and then fell.

Table 5-4: Advice reported by callers during each month of the study

	February	May	June	July
	%	%	%	%
Contact a pharmacist	4	12	7	3
999 or A&E	18	17	19	17
GP urgent	20	24	23	28
GP in 24 hours	19	19	19	20
GP in next few days	15	14	12	12
Self care	24	15	20	20
Total N=100%	487	156	501	178

$$\chi^2=27.8, df=15, p=0.023$$

5.3.4 Helpfulness of the advice given by NHS Direct

There was no change in callers' views of how helpful they found the advice given by NHS Direct (Table 5-5). The percentage of callers finding the advice very helpful was 64%, which was lower than the 76% found in the three first wave sites.⁷ This may be due to different sampling, different populations, different case-mix or different service configurations between this site and the three first wave sites.

Table 5-5: Callers' views of the helpfulness of advice given by NHS Direct

	Before	After
	%	%
Very helpful	64	63
Quite helpful	28	28
Not very helpful	6	6
Not helpful at all	2	3
Total N=100%	507	866

$$p>0.5$$

The subgroup analysis, restricted to callers advised to contact a GP in the next few days, or a pharmacist, or to self care gave similar results. There was no statistically significant difference in callers' views of the helpfulness of advice in this subgroup before and after the scheme: 62% (130/211) versus 61% (195/322) respectively found the advice very helpful.

5.3.5 Enablement

The enablement instrument has been outlined above. In the context of this survey, we found that completion of the six enablement questions was poor, with between 14% and 29% of respondents to the questionnaire not responding to individual questions. Non-response was at a similarly high rate whether callers had called NHS Direct about themselves or about someone else.

Given this caveat, there was some evidence that enablement reduced over time (Table 5-6). The proportion of callers feeling much better able to cope with their illness decreased, as did the proportion feeling much more confident about their health. The total enablement score decreased over time and this reduction was statistically significant when missing values were scored as zero. However, the fall in the score was small and may be judged as not being of practical importance. Why the scores decreased in this way is not known.

Table 5-6: Callers answering 'much better/much more' to enablement questions

	Before		After	
	n	%	n	%
Much better able to cope with life	382	12	649	9
Much better able to understand the illness/problem	424	25	713	22
Much better able to cope with illness/problem*	416	26	693	19
Much better able to keep yourself healthy	368	11	610	8
Much more confident about your health**	414	15	710	11
Much more able to help yourself	450	17	743	13
	mean	SD	mean	SD
Mean enablement score (SD)	2.98	3.31	2.62	3.09
Mean enablement score (SD) including missing values***	2.87	3.00	2.50	2.73

* $\chi^2=9.4$, $df=3$, $p=0.024$

** $\chi^2=7.9$, $df=3$, $p=0.047$

*** $t=2.3$, $p=0.021$

The secondary analysis, only of callers advised to contact a GP in the next few days, to contact a pharmacist or to self care gave a similar picture. The mean enablement score was 3.18 versus 2.94 for this group in the two time periods. This compares well with a mean enablement score of 3.1 for patients after a general practice consultation.²⁰

5.3.6 Satisfaction with NHS Direct

Callers were asked about their level of agreement with eight statements about NHS Direct (Table 5-7). The only statistically significant change in views occurred in relation to the waiting time to speak to a nurse, showing an improvement in this aspect of the service over time. However, there was no measurable change in overall satisfaction: the proportion of callers who strongly agreed that they were generally satisfied with the service was 49% before and after the scheme (95% confidence interval for change in satisfaction –5% to +6%).

Table 5-7: Caller satisfaction

Agree or strongly agree	Before		After	
	n	%	n	%
It was difficult to get through on the telephone	462	9	805	6
I had to wait a long time to speak to the nurse*	461	16	807	14
I think the nurse was understanding	485	94	835	94
I was given exactly the right amount of advice needed	474	81	825	81
I was given clear advice about when to get more help	469	86	818	88
The advice I was given worked well in practice	455	81	791	82
I felt reassured and worried less	473	81	829	81
I was generally satisfied with the service	487	90	829	90

* $\chi^2=9.8$, $df=4$, $p=0.04$

The secondary analysis only of callers advised to contact a GP in the next few days, to contact a pharmacist or to self care, gave a very similar picture. The percentage agreeing or strongly agreeing that they were generally satisfied with the service in both time periods was 89% (184/206 versus 274/309).

5.3.6.1 *Written comments*

Many respondents made written comments about NHS Direct: 42% (338/810) before the pharmacy scheme and 35% (517/1460) after the scheme. Although these were not a focal point of the evaluation, they are a valuable source of feedback on NHS Direct and are reported in Appendix A.

5.3.7 Impact on other services

Respondents were asked about the actions they took following the call to NHS Direct. Since they might take more than one action the percentages given in Table 5-8 sum to more than 100%. Although there appeared to be some small changes in service use, these did not reach statistical significance. There was no evidence of a change in use of pharmacists before and after the scheme.

Table 5-8: Contacts with other services

	Before %	After %
999	3	3
A&E	13	16

GP urgent	26	27
GP in 24 hours	16	19
GP in next few days	13	12
Contact a pharmacist	6	6
Self care	37	33
Other	7	4
Total N=100%	503	852

$\chi^2=10.7$, $df=7$, $p=0.15$

The secondary analysis only of callers advised to contact a GP in the next few days, a pharmacist or to self care gave a similar picture. Here, there was evidence of an increase in the use of pharmacists from 10% (21/211) to 14% (44/323), although this was not statistically significant.

5.4 Conclusions

Even before the pharmacy scheme began in Essex, nurses were advising a small proportion of callers (about 4%) to see a pharmacist. It might be argued, then, that the scheme was simply a formalisation of an existing practice, rather than an entirely new service.

However, the proportion of callers disposed to pharmacists did increase after the scheme was established. The observed average increase of three percentage points was small, but it was considerably larger in the early months of the scheme when as many as 12% of callers reported advice to visit a pharmacist. As time went by, callers' reported use of the disposition reduced to the level which had been observed prior to the scheme. In the light of this, it was perhaps not surprising that we were unable to find any measurable change in the helpfulness of advice, enablement, or overall satisfaction with the service reported by callers. Nor, on the basis of the caller's report, was there evidence of any change in the use of other services which could be attributed to the scheme.

There were a number of practical difficulties in conducting this research. We did not achieve the sample sizes we had hoped for at the outset. Although our central estimate was of no change in satisfaction or helpfulness, the 95% confidence interval for the change in satisfaction showed that this could have been as much as plus six percentage points or minus five percentage points.. In addition, to meet ethical and data protection requirements the postal surveys had to be sent out by the NHS Direct site itself. Unfortunately this introduced a variable delay between a call being made and a postal survey being sent by the site to the caller, which may have slightly lowered the response rate. However, we think it unlikely that this will have introduced any particular bias into the results.

As discussed above, the Patient Enablement Instrument has not been validated for use in the NHS Direct context and the number of missing values experienced in this

study limited its value. Nonetheless, there is clearly a need to develop sensitive measures of health gain in the context of telephone health care services, and this instrument may yet prove useful. Rather than developing a new tool specifically for telephone health care research, it would be useful to formally test the validity of this tool for use as part of a larger postal questionnaire.

The failure of the pharmacy scheme to impact on other services may simply result from the only partial implementation we observed. Some studies of the expansion of the role of pharmacists *have* found a decrease in use of other services, although authors of a systematic review in this area concluded that more rigorous research was needed.²² In addition, a study of the extent to which using P-class medicines in self-medication facilitated substitution between general practice and community pharmacy in the management of minor illness found that there was evidence of substitution between the GP and the community pharmacist.²³ Such findings suggest that, if implementation issues can be ironed out, there may still be scope for pharmacy referrals by NHS Direct to reduce demand for general practice.

6. EXPERIENCES OF CALLERS ADVISED TO SEE A PHARMACIST

6.1 Introduction

We have noted in previous chapters that, following the introduction of the pharmacy scheme, a larger proportion of callers was referred to pharmacy, at least to begin with. In this chapter, we consider the question of the actions and experiences of the caller who is given this advice, their views of the processes and outcomes of any subsequent consultation with a pharmacist, and their satisfaction with the consultation.

6.2 Methods

The postal survey of callers has been described in the previous chapter. The questionnaire we used included a four-page section for completion by those respondents who were advised to contact a pharmacist. When the study was designed, the proportion of callers who would be advised to contact a pharmacist once the scheme was in operation was unknown. We were aware that a simple random sample might not identify enough people directed to pharmacy to allow detailed analyses of this group, so we proposed a possible further 'top up' survey of 200 callers where the software log recorded that the caller had been triaged to pharmacy. Since the 'after' survey elicited only 59 callers who reported that they were advised to contact a pharmacist, we undertook a top-up survey. In order to identify 200 callers in the three ethics committee areas which had approved the study, we had to identify callers in September, October and November 2000. Questionnaires were sent to these 200 callers at the end of December 2000. No reminders were sent due to the failure of this survey to identify callers recommended to contact a pharmacist (see results section).

Before the scheme was established there was a hypothesis that callers who were exempt from prescription charges might be less willing to purchase over the counter medicine than those who pay for prescriptions, and thus might prefer to see their GP.¹³ Therefore, a sub-group analysis of callers advised to contact a pharmacist was undertaken by prescription payment status of the patient.

6.3 Results

6.3.1 Response rates

The 'after' survey identified 59 callers (of 876 respondents) who reported that they were recommended to contact a pharmacist. Of the additional 200 questionnaires sent to callers for whom the software had recorded that they were triaged to pharmacy, 65 were returned – a response rate, with no reminders, of 32%. Only 14% (9/65) of these respondents reported that they had, in fact, been advised to contact a pharmacist (see Table 6-1). Surprisingly, 9 of these callers reported being recommended to attend A&E or contact their GP immediately. This finding clearly

suggests that the triage outcome coded in the software log may not accurately reflect the advice actually offered to the patient. In view of this finding, we decided against sending reminders to non-respondent to increase our response rate, since it would be likely only to generate another 20 pharmacy users, at best.

Therefore, the analysis below is based only on the 68 respondents who reported that they had been recommended to contact a pharmacist, identified both from the 'after' survey detailed in Chapter 5 (59 respondents) and the 'top-up' survey (9 respondents).

Table 6-1: Advice reported by respondents to the 'top-up' survey

Recommendation	%
A&E	8
GP urgent	6
GP in 24 hours	14
GP in next few days	8
Contact a pharmacist	14
Self care	44
Did not phone /refusal/ missing	6
Total N=100%	65

6.3.2 Appropriateness of and compliance with advice

After the scheme commenced, 86% of those recommended to contact a pharmacist felt that the advice was very or quite appropriate, and 75% went on to attempt to contact a pharmacist (Table 6-2). There were no statistically significant differences in these proportions before and after the scheme.

Table 6-2: Callers' views on the appropriateness of advice to contact a pharmacist and whether they followed that advice

	Before %	After %
Appropriateness of advice+		
Very appropriate	44	46
Quite appropriate	50	40
Not very/not at all	6	14
Total N=100%	18	63
Tried to contact pharmacist++	%	%
Yes	78	75
No	22	25
Total N=100%	18	64

+ $\chi^2=1.2$, $df=2$, $p>0.5$

++ $\chi^2=0.06$, $df=1$, $p=1.0$

In the remainder of this chapter we focus on the period when the scheme was in operation. There was a relationship between respondents' views of the

appropriateness of the advice they received and whether they followed it (Table 6-3). Respondents were much *more* likely to follow the advice if they felt it was 'very appropriate', than if they felt it was 'quite' or 'not' appropriate. There was some evidence that respondents were *less* likely to follow the advice if they had to pay for prescriptions, although this was not statistically significant.

Table 6-3: Caller action, by view of appropriateness

	Followed advice	Did not follow advice	N=100%
Appropriateness of advice*			
Very appropriate	90%	10%	29
Quite appropriate	72%	28%	25
Not very/not at all	44%	56%	9
Pay for prescriptions+			
Yes	67%	33%	24
No	77%	23%	34

* $\chi^2=8.1$, $df=2$, $p=0.02$

+ $\chi^2=0.7$, $df=1$, $p>0.5$

6.3.2.1 Reasons for not complying

Five respondents cited inconvenience as their reason for not following the advice, with one respondent commenting that there was no pharmacy open in the local area, and another that their problem was of a personal nature; four respondents said the patient got better; three said the patient got worse; two said that they went to their GP instead; one did not agree with the advice given and felt that the problem was more serious than NHS Direct believed; one had the medication needed at home; and one had already been to the pharmacist.

6.3.3 Getting to the pharmacy

Of the 48 people who attempted to go to a pharmacy, 67% (32/48) did so in under 4 hours; 75% (36/46) visited their usual pharmacy; 33% (16/48) got there on foot and 63% (30/48) by car; and 91% (40/44) had a travel time of under 10 minutes.

6.3.4 Speaking to the pharmacist

Two-thirds of respondents (31/48) who went to the pharmacy spoke to the pharmacist. When they spoke to a pharmacist, three-quarters (24/30) told the pharmacist that they had been referred from NHS Direct.

Almost two-thirds (19/31) were recommended a product by the pharmacist (including anthisan tablets and cream, antihistamine, calamine, a cough mixture, dailatrin, dioralyte, feldene, hydrocortisone, ibuprofen, immodium, piriton, pripsen tablets, snuffle babe, and worm tablets: products which reflect a "summertime casemix"). A further six people were recommended a medication by the counter staff (antifungal cream, dioralyte, nurofen, piriton and threadworm tablets). No respondent stated that they did not speak to a pharmacist because the wait was too long or a pharmacist was

unavailable. When a reason for not speaking to a pharmacist were given, it was because the respondent did not feel it was necessary to do so. 71% (34/48) spent some money at the pharmacy, and 29% (14/48) did not.

6.3.5 Recommendation to contact a service

Having spoken to a pharmacist, 29% (9/31) were advised to see their GP, of whom eight people did so. Nobody was advised to go to A&E. There was a suggestion in the data that people who could get their prescriptions free were more likely to be told by the pharmacist to see their GP than those who paid for them (35% (6/17) versus 17% (2/12)). However, because of the small number of respondents, this finding did not reach statistical significance, and in any case may not necessarily be a causal association.

6.3.6 Helpfulness of advice

Only 39 people completed the question about the helpfulness of advice given by the pharmacist because some felt that the question was not applicable to them: 38% found the advice from the pharmacist very helpful, 56% quite helpful and 5% unhelpful, which may suggest that this advice provided “added value”, following the original advice from the NHS Direct nurse. For context, overall 64% of callers to Essex NHS Direct found the advice from the nurse very helpful (see 5.3.4 above).

78% (31/40) acted on all of the advice, 20% on some of it and 2% did not act on the advice. No respondent stated why they did not act on all the advice, and nor did any respondent use the questionnaire options on disagreeing with the advice, thinking it inappropriate or finding the medication too expensive. This compares with 85% of callers reporting that they followed all advice in the first wave NHS Direct sites.

6.3.7 Satisfaction with the visit to the pharmacy

Satisfaction rates for different aspects of the pharmacy service were reasonable, except for privacy, which prompted dissatisfaction from about a quarter of those who visited (24%, 95% CI 10 to 38%): see Table 6-4, below.

Table 6-4: Satisfaction levels with different aspects of attending the pharmacy

	Very satisfied or satisfied	Acceptable	Dissatisfied or very dissatisfied	N=100%
Privacy	30%	46%	24%	37
Time with pharmacist	66%	26%	9%	35
Advice given	80%	17%	3%	35
Location of pharmacy	76%	24%	0%	37
Opening hours	65%	27%	8%	37
Counter staff	65%	35%	0%	31
Waiting time	73%	24%	3%	37

6.3.8 Use of general practice

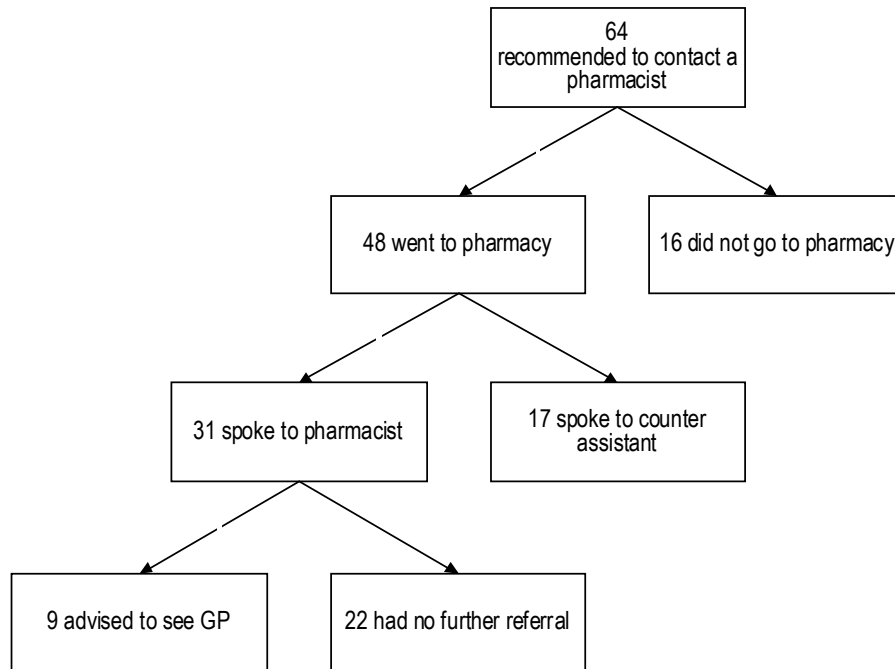
Of the 48 people who went to a pharmacy, 18 (38%) subsequently went to see a GP about the same problem and a further 4 (8%) intended to see a GP. Eight of those who went on to their GP did so on the advice of the pharmacist.

6.3.9 Future action for the same problem

If these 48 people had the same problem again, 31% would follow the advice given by the pharmacist, 29% would go to their GP, 15% would call NHS Direct, 6% would speak to a pharmacist, 6% would manage the problem themselves, or use a combination of these things.

6.3.10 Attrition from the scheme

Of the 68 respondents who reported being advised to contact a pharmacist, 64 completed the relevant section of the questionnaire. A flow chart of these 64 respondents shows that only half went to the pharmacy and spoke to the pharmacist (Figure 6-1), which will clearly reduce the potential impact of the scheme on the workload of pharmacists.

Figure 6-1: Attrition from the pharmacy scheme

6.4 Conclusions

The responses to our top-up survey suggested that the software logs were not accurate records of the actual advice given to callers by nurses. For calls recorded by the routine data as 'contact a pharmacist', callers reported that the advice actually given involved a range of other recommendations. Only 1 in 7 calls recorded as disposed to pharmacy appeared to be accurately recorded. While it is possible that some callers may have misheard or misinterpreted the advice they were given, previous work on advice and compliance in NHS Direct suggests that such callers will be few in number.⁶ This finding clearly has implications for interpretation of the routine data reported in chapter 4, which must be viewed as nothing more than impressionistic.

Of those callers who were advised to contact a pharmacist, over 80% thought the advice was appropriate and 75% followed it, being more likely to follow it if they thought it appropriate. The level of compliance with this advice was similar to the level of 85% found for advice generally in NHS Direct.⁶ Reasons given for non-compliance were similar to those expressed by both nurses and callers in transcripts of the calls discussed in chapter 7: that is, opening times of local pharmacies, having a personal health problem, wanting to use an alternative service like a GP, disagreeing with advice or having the medication needed at home. Respondents also made the point that health problems can change after the call to NHS Direct has been made. The problem may either improve or worsen, and callers may judge that a different action is needed from that advised by NHS Direct.

Not everyone who went to the pharmacy as part of this scheme spoke to a pharmacist and therefore did not necessarily receive the advice, assessment or treatment from a

pharmacist which the scheme was intended to provide. However, those attending the pharmacy were generally satisfied with their visit and the advice they received. The only particular complaint related to a lack of privacy. This is an issue which applies more generally to consultations in pharmacies, and which has been under active consideration by the pharmacy profession. As pharmacists take on a more formal role within the NHS – as outlined in *Pharmacy in the Future* – this issue will need to be addressed.

Numbers were too small to test the hypothesis that callers exempt from prescription charges may be less willing to purchase over-the-counter medicine than those who pay, and therefore may prefer to see their GP.¹³ This issue should be explored further in future research.

At least a third of people who went to the pharmacy also contacted a GP about the same problem, suggesting that the visit to a pharmacy may not directly substitute for GP care. This is consistent with the findings from a study of P-class medicines in self-medication for minor illness, in which 14% (76/533) of those who visited a pharmacist to obtain a P-class medicine followed that up with a GP visit.²³

7. NHS DIRECT CALLS IN WHICH A PHARMACY VISIT IS DISCUSSED

7.1 Introduction

The routine call log data and caller surveys can give only limited information on the problems presented to NHS Direct and how advice is given by the nurse handling the call. There are a range of detailed practical issues which may impact on the overall success of the scheme, such as the characteristics of the problems presented by those callers who are advised to visit the pharmacist, how the nurse offers this advice, the rationale given by the nurse for how the pharmacist might help, and how the caller reacts to the advice. These issues can be explored through an analysis of call transcripts.

7.2 Methods

Our original intention was to identify, from the software log, a random sample of 200 calls disposed to pharmacy, after a three month settling-in period, for anonymised transcription and analysis. In practice, however, calls disposed to pharmacy could not be reliably identified using the software log. Of those calls which were recorded in the software log as being disposed to pharmacy, many were transcribed and found to include no mention of pharmacy. Thus, to locate calls which were in fact disposed to pharmacy, Essex NHS Direct staff had to listen to the entire tape of selected calls prior to transcription, only transcribing those which actually mentioned pharmacy. This increased the workload of this part of the project and so we reduced the number of transcripts for analysis to 100.

Random sampling was not undertaken due to the difficulties in locating any calls at all. The reduction in the sample size and the possibility of selection bias reduce our ability to estimate the prevalence of characteristics and behaviour, so although the figures presented below accurately represent the calls in the same, they should not be interpreted as representative of calls as a whole.

For each call transcript provided, a single researcher read the transcript and recorded the problem presented, the way in which the pharmacy disposition was introduced to the caller and the caller's reaction to the advice. Below, verbatim quotes are presented from the transcripts in order to illustrate the issues presented in the results.

7.3 Results

Of the first 30 transcripts received, only 16 (53%) mentioned pharmacy. The other 14 transcripts had no mention of pharmacy but included advice to attend an A&E department (3), a GP (4) or self care/information (7). Staff at Essex NHS Direct checked individual call logs and confirmed that these calls were all recorded by the computer as pharmacy disposition. In total, 93 calls which were logged as being disposed to pharmacy and which did include a mention of visiting a pharmacy were

transcribed and these are reported below. About two-thirds (66/93) of the transcripts concerned children rather than adults.

7.3.1 Condition

The conditions presented to NHS Direct in these calls included skin rash (31 calls), cough (9), sore throat (9), stomach pain (8), vomiting and/or diarrhoea (6), insect bite or sting (4), constipation (3), chest pain (3), sunburn (3) and others such as hay fever, back pain, knee pain, joint pain, threadworm, teething, earache, fever, flu and sore eyes. This does not reflect the whole range of issues covered in the Keele adaptation of the 68 guidelines (Appendix B). This may be due to the small number of transcripts studied or due to nurses not using the pharmacy disposition for specific issues.

7.3.2 The reason for calling

It was not always clear why the call to NHS Direct had been made. Although all calls were triaged as advice calls, 11 involved a question about a medication, such as whether the caller was experiencing an adverse effect from a medication, the appropriateness of a medication they were taking or thinking of taking, or the availability of a medication.

He (the doctor) gave her some antibiotics – Suprex 200mg (for tonsillitis) – and she’s wondering if they are not strong enough? T7

So he (the doctor) has given me these pain-killers that are not soothing the pain at all. T12

I’m on Zyban to give up smoking and I think it is one of the side effects. T22

He (the doctor) said ‘I will give you some stronger painkillers’...but when I read the leaflet it said do not take these if you have had gall bladder surgery – well I recently had my gall bladder taken away so of course I was frightened to take them. T92

I went to the doctor’s. He didn’t give a prescription but said I could buy it over the counter. But I actually told him that I couldn’t get this cream over the counter and he said I could. T14

In eight of these, consultation with a pharmacist was advised, and in a further two a visit to the chemist was advised. It should be noted that, in practice, the distinction between a call for information about a medication and a call for advice about a symptom is not easy to maintain.

Other reasons that were clearly stated were: a desire for a diagnosis, for example whether spots were chicken pox (20 calls); relief from symptoms (16 calls); whether a doctor was needed (10 calls); whether something was contagious (4 calls). In 32 calls the reason for calling was not stated.

7.3.3 Introduction of disposition to caller

In 75 calls, the nurse introduced the pharmacy disposition by stating that the caller should ‘speak to a pharmacist’, and sometimes emphasised that it was important to

speak to the pharmacist rather than the counter staff. However, in 12 calls the nurse suggested that the caller should 'visit a chemist' for a medication.

Right, my protocol says...to see a pharmacist, which is what I was going to suggest to you anyway. Basically go to the chemist – ask to speak to the pharmacist and see what they would recommend. T45

And another thing is popping out and getting Dioralyte from the chemist. T80

In a further six calls, the nurse made the observation that pharmacies were closed (3), waited for the patient to suggest the pharmacy (2), or dealt with the medication query themselves (1).

7.3.4 Rationale for contacting a pharmacist

Sometimes nurses gave the caller a reason why they were being advised to contact a pharmacist. In many cases this was that the pharmacist had an advantage over the NHS Direct because they could see a rash (15 calls). In other calls the rationale was that the pharmacist could recommend something (45) or that a specific medication was available (17).

What about speaking to the pharmacist to see if there is anything different you can take for the pain – something you could buy over the counter? T35

Go and have a word with the pharmacist at the chemist and see if he can suggest anything that would help you. T36

Pop into the pharmacist tomorrow and see if he can recommend anything. T37

If you can, today, pop into your chemist and ask to see the pharmacist because he or she will be able to see it (the rash). I think it's something quite minor. They may give you an antihistamine or something along those lines. T41

7.3.5 Caller's reaction to the advice

In 22 transcripts the caller expressed some objection to contacting a pharmacist: 7 had already been to see a pharmacist; 6 wanted to see another health professional such as GP; 2 were concerned about the availability of a pharmacy; and other reasons were that the caller already had the medication needed, did not want medication, had a GP appointment, was too ill to travel, objected to all the advice given, or had a personal health problem. Although the caller questioned the advice they were given, we do not know whether or not they went on to contact a pharmacist.

Nurse: if it is still bad go and see the pharmacist – see what he says.

Caller: Failing that I'll go and see the doctor. T18

Nurse: Why don't you pop down to the pharmacist...

Caller: Well I had a...when was it, Thursday, my wife phoned the chemist and they said not to worry about it.

Nurse: ... what I suggest you do is discuss with the pharmacist how much Piriton you should be taking...if there is no improvement by Monday then go back and see your GP.

Caller: Back to the GP, yeah. T30

Nurse: you can pop along to the pharmacist and ask for an antihistamine like Piriton syrup.

Caller: I've got some of that at the moment. T3

7.3.6 Advice to contact a GP

In 7 calls the nurse recommended that the caller contact their GP as well as the pharmacist.

The best thing to do is to pop round and see your GP tomorrow...and another thing to do as well – any big Tescos will be open today – just pop in and show it to a pharmacist...he might just suggest maybe some Piriton syrup or tablets as well. T52

7.3.7 The scheme going smoothly

In 53 calls the nurse followed the scheme and the caller raised no objection to the advice. One element of the scheme involved nurses giving callers a reference number to pass to the pharmacist, who could then enter it on a 'referral log form' to return to Essex NHS Direct. In our sample, the nurse gave the caller a four-digit reference number in only 17 cases.

7.4 Conclusions

There was further evidence from this part of the evaluation that the software log records were not an accurate source of information about the use of the pharmacy scheme in practice, and overestimated the extent to which the scheme was used.

The transcripts we examined showed, in general, the pharmacy disposition being used as intended. The rationale for the referral was frequently in terms of obtaining a medication, so that in some calls there was a lack of clarity over the distinction between seeing a community health professional, on the one hand, or simply obtaining medication, on the other.

On the whole callers seemed, receptive to the advice offered, except in cases where they had already visited the chemist, or had a strong prior preference for seeing their GP. We have previously noted this as one reason for "non-compliance" with NHS Direct advice.⁶

Among calls disposed to a pharmacist, it is notable that many were about rashes. About one third of the call transcripts we examined concerned rashes, whereas only 14% of all calls to NHS Direct concern any skin problem.⁵ The higher proportion of rashes in our sample may indicate that skin problems make up a higher proportion of calls involving the 68 guidelines, or that nurses are happy to use the pharmacy disposition for rashes. There is evidence from other parts of this evaluation that the latter is certainly the case (see chapter 9, below). Calls about rashes were handled

33

differently from other calls in that nurses had a clear and understandable rationale for the pharmacy referral – to allow visual examination – which they communicated to callers.

8. VIEWS OF PHARMACISTS

8.1 Aims

The pharmacy scheme relies upon a group of professionals – community pharmacists – not previously integrated with NHS Direct, and their active support for the scheme is clearly essential to success. This part of the evaluation aimed to establish the views of pharmacists themselves on the scheme in particular as well as on NHS Direct in general.

8.2 Methods

A structured postal survey was sent to all community pharmacists in the area served by Essex NHS Direct (Essex and the London Borough of Barking & Havering). Names and addresses were derived from the Local Pharmaceutical Committee register for these areas, yielding a sample of 365 pharmacists. The survey was sent to pharmacists in September 2000, approximately 6 months after the scheme began, with up to two reminders sent at fortnightly intervals to non-responders. The questionnaire included items on pharmacists' views of NHS Direct, their impressions and experiences of the pharmacy scheme in Essex, and questions about their pharmacy and themselves. Data was entered into Access and then exported into SPSS for statistical analysis.

8.3 Results

8.3.1 Response rates

Of the 365 questionnaires mailed, one questionnaire did not reach the addressee and two pharmacists refused to complete the survey. 263 usable responses were returned, giving a response rate of 72% (263/364).

8.3.2 Characteristics of respondents

The characteristics of responding pharmacists were analysed to give a picture of respondents to the survey. The main characteristics of the respondents and the pharmacy to which the survey was addressed are shown in Table 8-1 below. About one-third of pharmacists were aware of having seen a patient referred to them by NHS Direct.

Table 8-1: Characteristics of respondents

Characteristic	N	%
Male	174/260	67
Non-owners of pharmacy	156/261	60
Pharmacy located in a suburban area	147/259	57
Independent pharmacy	121/262	46
Years in practice (mean)		16

Contacted NHS Direct as a patient	26/259	10
Dealt with a NHS Direct referral	90/259	35

8.3.3 Views of NHS Direct in general

Pharmacists were asked to indicate their level of agreement with six statements about NHS Direct. Four statements were positive and two were negative.

Overall, pharmacists appeared to be positive about NHS Direct. There were differing, but high, levels of agreement with three of the positive statements: support of NHS Direct and its benefit to both patients and the NHS. While general support for the service was high, there was less certainty over the impact of the service on the NHS, or its value for money.

Table 8-2: Pharmacists' views of NHS Direct

Statement	Agree/ Strongly agree	Not sure	Disagree/ Strongly disagree	N=100%
(+) I am generally supportive of NHS Direct	80%	12%	8%	262
(+) NHS Direct is beneficial for patients	77%	16%	6%	262
(+) NHS Direct is beneficial for the NHS	65%	25%	10%	260
(+) NHS Direct is value for money	21%	54%	25%	261
(-) NHS Direct is an unnecessary addition to the NHS	18%	21%	61%	261
(-) NHS Direct will increase demands on the NHS	30%	33%	37%	259

8.3.4 Pharmacists' views of the scheme before it began

Respondents were also asked to cast their minds back to before the scheme began and indicate their agreement with two statements about the scheme. There was substantial support for the scheme before it began, even though half of respondents expected it to lead to an increase in workload.

Table 8-3: Pharmacists' views of the scheme before it began

Statement	Agree/ Strongly agree	Not sure	Disagree/ Strongly disagree	N=100%
I was generally supportive of plans for the scheme before it began	74%	16%	10%	263
I expected this scheme to increase my workload	50%	27%	23%	262

8.3.5 Views of the scheme in operation

It became clear during the design of the survey that the number of referrals to pharmacists was lower than expected, so that any one pharmacist's direct experience of the scheme was likely to be limited. In view of this we focused a number of questions on *impressions*, rather than *experience*, of the scheme. This gave pharmacists the opportunity to offer their opinions without necessarily having had the experience of dealing with a NHS Direct referral. The results are shown in Table 8-4.

Table 8-4: Pharmacists' impressions of the scheme in operation

Statement	Agree/ strongly agree	Not sure	Disagree/ strongly disagree	N=100%
(+) The pharmacy scheme is a good thing for callers	83%	15%	2%	260
(+) I feel I have a good understanding of how the NHS Direct pharmacy scheme works	73%	18%	9%	261
(-) Too many NHS Direct referrals have to be sent on to other services	24%	60%	16%	261
(-) Some NHS Direct callers are inappropriately referred to pharmacists	16%	58%	27%	259
A pharmacist, rather than a counter assistant, should deal with people referred by NHS Direct.	73%	7%	20%	262
Pharmacists should spend more time with people referred by NHS Direct than with other patients	11%	10%	79%	261
People referred by NHS Direct need a consultation in a quiet area away from the counter	47%	25%	29%	261

These results suggest high levels of support for the pharmacy scheme, and that three-quarters of pharmacists felt they understood how it worked. However, as might be expected from the general lack of direct experience of the scheme, there was uncertainty over the working of the scheme in practice, in terms of referrals to and from pharmacists.

Although most pharmacists felt referrals to them merited their personal attention, there was a rejection of the idea that referrals should have higher priority than other patients. Opinion was more evenly spread over the issue of consulting in a quiet area, though almost half of pharmacists felt this was desirable. This spread may reflect practical difficulties in ensuring confidential consultation, such as lack of space. As we have noted above, the lack of privacy in the pharmacy is a particular concern for callers.

Was there any association between the views expressed and having had experience of the scheme in practice? Grouping respondents according to whether or not they reported experience of a referral from NHS Direct showed little difference between the groups, though slightly higher levels of agreement with positive or neutral statements were found among pharmacists who had dealt with a referral. While not statistically significant, this suggests that experience may have a positive effect on their views of the scheme. However, for two statements the differences between pharmacists with or without experience of the scheme were statistically significant (see Table 8-5).

Table 8-5: Pharmacists with a referral v pharmacists without a referral

Statement	Agree/ strongly agree	Not sure	Disagree/ strongly disagree	N=100%
(+) The pharmacy scheme is a good thing for callers				

those with experience of the scheme	88%	12%	0%	88
those without experience of the scheme	81%	17%	2%	168
(+) I feel I have a good understanding of how the NHS Direct pharmacy scheme works*				
those with experience of the scheme	84%	12%	3%	89
those without experience of the scheme	68%	21%	11%	168
(-) Too many NHS Direct referrals have to be sent on to other services				
those with experience of the scheme	22%	61%	17%	89
those without experience of the scheme	24%	60%	16%	168
(-) Some NHS Direct callers are inappropriately referred to pharmacists**				
those with experience of the scheme	15%	43%	42%	88
those without experience of the scheme	17%	65%	19%	167
A pharmacist, rather than a counter assistant, should deal with people referred by NHS Direct.				
those with experience of the scheme	76%	4%	20%	90
those without experience of the scheme	71%	8%	21%	168
Pharmacists should spend more time with people referred by NHS Direct than with other patients				
those with experience of the scheme	16%	12%	72%	90
those without experience of the scheme	8%	10%	83%	167
People referred by NHS Direct need a consultation in a quiet area away from the counter				
those with experience of the scheme	51%	19%	30%	89
those without experience of the scheme	44%	27%	29%	168

* $\chi^2 = 8.6$, 2 df, $p < 0.02$

** $\chi^2 = 16.7$, 2 df, $p < 0.001$

8.3.6 Involvement in the organisation of the pharmacy scheme

6% (16/263) of our respondents said that they had been involved in the planning of the scheme. The reported involvement took a number of different forms, such as being a member of the steering committee, attending a session on training, or being a member of the Local Pharmaceutical Committee.

8.3.7 Workload

Although a half of respondents anticipated an increase in their workload before the scheme began, only 6% (5/90) felt they had experienced an actual increase in their workload as a direct result of the scheme.

8.3.8 Experience of NHS Direct

Pharmacists' experience of being either a user of NHS Direct or dealing with a referral from NHS Direct was low. 10% (26/259) of respondents had contacted NHS Direct as a patient, or on behalf of someone else.

35% (90/259) of pharmacists had dealt with a referral from NHS Direct since the scheme began operating, six months prior to the survey. Of these, 59 (22% of all respondents) reported dealing with a referral in the previous month, which amounted to 161 patients in total. Among pharmacies which were aware of having had a referral from NHS Direct, the median number of patients seen was one, and the mean two.

6% (5/89) of pharmacists did not feel comfortable advising patients referred by NHS Direct, 77% (69/90) reported that patients appeared to be happy about being referred to the pharmacy and 86% (77/90) felt that people accepted the advice given to them by the pharmacist.

8.3.9 Views on NHS Direct kiosks

The *NHS Plan* (section 12.2) outlined a commitment to provide more than 500 NHS Direct information points, giving touch-screen information and advice about health, by 2004.¹⁸ They are to be located in public places such as libraries, supermarkets, walk-in centres, A&E departments and pharmacies. At the time of our survey some information points had been introduced in public places. Pharmacists were asked for their views on NHS Direct kiosks and the feasibility of accommodating one in their pharmacy (Table 8-6).

About a third of pharmacists would not be willing or able to accommodate a kiosk, with lack of space given as the main obstacle. Of those who would not accommodate a kiosk, about one in four felt that kiosks should not replace advice from a pharmacist.

Table 8-6: Views on NHS Direct kiosks

View on kiosks	N	%
Willing and able to accommodate a kiosk	86/239	36
Willing and able if certain conditions were met	84/239	35
Would not be willing or able to accommodate a kiosk	69/239	29
Of those willing and able if certain conditions were met		
if they had more space	44/84	52
if a financial incentive was offered	24/84	29
Of those not be willing or able to accommodate a kiosk		
lack of space in pharmacy	46/69	66
pharmacist rather than computer should advise patients	19/69	27
financial resource issues	2/69	3

8.4 Discussion

The response rate to this survey was good, and there was little evidence of response bias in the sample. The majority of responding pharmacists were male, which is consistent with results from other surveys of community pharmacists,²⁴ and reflects the gender balance (74% male) of pharmacists in Essex. The average pharmacist's 16 years of practice in this survey suggests that our respondents were well experienced community pharmacists.

Overall, pharmacists appeared to be supportive of both NHS Direct and the pharmacy scheme. Pharmacists had positive impressions of the scheme regardless of whether they had dealt with a NHS Direct referral, and experience of dealing with referral from NHS Direct referral did not appear to produce a less positive view.

Some pharmacies had dealt with more referrals than others, with three pharmacies accounting for a third of all referrals. Clearly, for the majority of pharmacists the anticipated increase in workload had not, as yet, materialised. It would be interesting to know if their views change if and when the number of referrals increases.

The limited experience of the scheme reported by respondents is consistent with findings from the caller survey. If anything, we would expect our survey to over-estimate the experience of pharmacists as a whole, since it is well known that individuals are more likely to respond to a survey if it is salient to them.²⁵ As a result of this limited experience, there was no clear view about how the scheme was operating in practice, and nor was there any finding which suggested, from the pharmacist point of view, any particular cause for concern.

Although there was general support for the proposed information kiosks, it was clear from this survey that the lack of space in many pharmacies represented an obstacle to accommodating a kiosk in practice.

9. THE VIEWS OF NHS DIRECT NURSES

9.1 Aims

In designing the current evaluation, we had not originally intended to seek nurses' views of the pharmacy scheme. However, as the evaluation progressed it became clear that the implementation of the scheme was partial, and it seemed likely that nurses could offer valuable insights to why this was so, as well as more general views on the strengths and weaknesses of the scheme as a whole.

9.2 Methods

A member of the research team visited Essex NHS Direct on a weekday morning during October 2000. Nine nurses – the majority of those on duty at the time – agreed to talk to the researcher about their experience of the scheme. Interviews took place in a quiet part of the workplace and lasted about 15 minutes each. Notes of each interview were made during and after the interview itself, and these were read and reread to identify common themes.

9.3 Results

9.3.1 Positive views of the scheme

All the nurses stated that they had felt enthusiasm for the pharmacy project and were optimistic about its success before the scheme got underway. NHS Direct nurses appeared to have been comfortable referring patients to pharmacists before the introduction of the scheme. For example, the majority said that if a GP disposal was recommended, they might say to the patient: 'see your GP, but you could also pop in to see your pharmacist as well'.

9.3.1.1 Pharmacists as an under-utilised resource

Some nurses felt that the pharmacy disposition had a valuable place in the system as they felt that pharmacists were under-utilised for their experience and knowledge by the public. Most of the nurses felt that by referring to pharmacists they could reduce the number of unnecessary visits to GPs.

9.3.1.2 Visual aid

The nurses were positive about the benefit of visual inspection which pharmacists could offer but NHS Direct could not. For example, a child with a rash could be referred to a pharmacist for a visual inspection rather than waiting for an appointment with a GP.

9.3.2 Negative views of the scheme

Most of the nurses interviewed said that the pharmacy disposition was 'no different to what we did before'. Overall, they offered more negative comments about the scheme than positive ones.

9.3.2.1 *Inappropriate guidelines*

The nurses all felt that some of the guidelines used were inappropriate, in that many calls for which the software suggested pharmacy could be managed by self-care. This led to nurses over-riding the suggested disposition. Although the software does have the capacity for 'downgrading' a disposition, at the time of the evaluation the nurses at the Essex site were not allowed to use it. As a result a software recommendation to refer to pharmacy may be, in practice, downgraded to self-care by the nurse but will still be recorded as a pharmacy referral on the software. All nurses had wanted to downgrade pharmacy referrals to self-care at some point and for the majority of nurses this had been a regular occurrence. Particular medical symptoms that nurses identified as having inappropriate disposition to the pharmacist included abdominal pain, vomiting and diarrhoea, headache and allergies. (In fact, the headache algorithm did not dispose to pharmacy).

9.3.2.2 *Lack of rationale*

Over half of the nurses felt that there was a lack of information on the screen giving the rationale behind the software recommendation to send a patient to a pharmacist. This tended to reinforce their belief that some guidelines were inappropriate.

9.3.2.3 *Focus on medication not advice*

The majority of the nurses saw the pharmacy disposition more as a method of obtaining medication, rather than advice, from the pharmacist. The nurses commented that if the software advised a pharmacy referral but they were aware that the patient had a medication at home that would alleviate their symptoms, the patient would not be referred to a pharmacist. One nurse said: 'it's [pharmacy disposition] helpful for medication queries if we can't work out what medication they need'.

9.3.2.4 *Patient convenience*

A minority of the nurses suggested that patients would not want to go and see a pharmacist – they may already have been, or may not want to visit another healthcare professional if they expect NHS Direct to sort out their problem. One nurse felt it was a problem that late night calls could not be dealt with by a pharmacist until the following day.

9.3.2.5 *Pharmacists as profit-making businesses*

One nurse raised concerns about referring patients to a professional who was also a potential 'profit maker'.

9.3.2.6 *Training and audit issues*

Some nurses felt that there was a lack of training about the pharmacy disposition, or that the training given had been inadequate. The nurses expressed concerns that training sessions may not have been run by a qualified pharmacist. From the interviews with nurses the researcher gained the impression that nurses and pharmacists had been trained in the same sessions. The nurses said they had felt 'outnumbered' by pharmacists in these sessions.

The nurses wanted to see more internal audit of their own performance and that of the pharmacy scheme. They said they felt 'demoralised' about the scheme due to the lack of information circulated about how the scheme was progressing.

9.3.2.7 *Use of pharmacy patient ID numbers*

In theory, callers advised to visit a pharmacy by NHS Direct were given a unique number to be passed on to the pharmacist when they visited. The pharmacist would then complete a form recording the visit by the referred patient, which was intended to provide the pharmacists' account of the consultation. In the pilot scheme pharmacists were offered £2, to cover administration and postage costs, for each form completed and returned to NHS Direct.

At the time of our interviews there appeared to be much variation in practice over the nurses' use of ID numbers. One nurse reported always giving a patient an ID number as they believed it 'made the patient feel secure' by legitimising their subsequent visit to the pharmacist. The other nurses interviewed reported either never administering them ('I've never been told to give the patient an ID number') or having stopped issuing them in recent months. Various explanations were given, including that 'ID numbers don't work', that the patient would not have a pen to hand to write it down, and that patients have little inclination to follow the advice to visit the pharmacist and so nurses think it unlikely that they will utilise their ID number. Even though the majority of nurses did not use ID numbers, some nurses said that if a pharmacy disposition was recommended they would still stress to the patient that they should seek advice from a pharmacist rather than a counter assistant.

9.3.3 Future changes to the pharmacy disposition

All the nurses felt that the pharmacy disposition could work but aspects of the scheme would require changing. They wanted more feedback from pharmacists about the appropriateness of the patients they referred (although this may not be possible if patients are not given an ID number to give to pharmacists). They also suggested that nurses should work in co-operation with pharmacists on determining which guidelines

may result in a pharmacy referral. The nurses interviewed suggested a working party of nurses and pharmacists might iron out problems with the referral guidelines. Some nurses felt that patients needed a private consultation area in the pharmacy. They believed that pharmacies should become more like NHS Direct – in being able to preserve patient confidentiality – if they were to receive referrals from NHS Direct.

9.3.4 Reflections on the research process

The interviews posed a difficult situation for both the researcher and the nurses. The nurses were not following the prescribed scheme, but agreed to be interviewed. In such a context conscious or unconscious distortion of the interviewee's views is clearly a possibility. In practice, the researcher felt that the views given were honest and frank. Although the interviews were not a component of the research protocol they proved very helpful in confirming the picture which emerged from the caller survey, the pharmacist survey and transcript analyses, and in offering explanations for the partial implementation of the scheme.

9.4 Discussion

The picture that emerged from these interviews was one of nurses who supported the aims of the scheme, but not its operation in practice. The majority of negative comments related to the 'inappropriateness' of the guidelines used within the pharmacy disposition, the quantity and quality of staff training in the scheme, and the lack of rationale given by the software for a pharmacy referral. The combination of these issues led to nurses not taking the pharmacy disposition seriously and overriding the guidelines. Those nurses who did offer positive comments felt that pharmacists were an under-utilised resource and could have a valuable place within NHS Direct.

Almost all the nurses interviewed did not issue ID numbers to patients, apparently because of growing indifference to the scheme as well as a lack of communication between management and nurses. Unfortunately, this part of the scheme was intended to provide the feedback from pharmacists which both nurses and managers said they wanted. Such feedback was therefore lacking.

10. CONCLUSIONS

10.1 Summary of findings

It is clear from the results we have presented above that there were difficulties in the implementation of the pharmacy pilot scheme in Essex. Overall, our results suggest that the scheme was only partially implemented, with initial enthusiasm and use of the pharmacy referral in accordance with prompts from the decision support system giving way to falling use of the pharmacy disposition in practice, despite the prompts of the system.

That this was not reflected in the software log is simply the result of operational policies which prevented 'downgrading' of the advice given. However, as the nurses moved away from using the pharmacy disposition they did, in practice, downgrade the advice to callers to self-care, while the log still recorded it as a pharmacy referral, so that over time the call logs became a less and less accurate reflection of the advice being given to callers.

Taken together, the evidence of the caller surveys, transcripts, call logs and nurse interviews are all consistent with this interpretation.

However, although the pharmacy disposition was used less than expected as time went by – and overall, no more often than informal advice to consult a pharmacist had been given prior to the scheme – when it was used, it seemed acceptable to callers. We found no clear evidence that the use of the pharmacy disposition either reduced or increased caller satisfaction or enablement. In practice, about a half of those advised to speak with a pharmacist actually did so, and these callers were generally satisfied with their visit and the advice they received, though the lack of privacy in the pharmacy emerged as a particular concern. About one third of those speaking to the pharmacist also consulted their GP about the same condition, suggesting that the pharmacy disposition may not always simply substitute for GP care.

Nonetheless, these findings raise the question of what would have happened had the implementation of the scheme been complete rather than partial. The routine call data suggests that overall, the triage software may have disposed about 6% of callers to pharmacy. Had this recommendation been accepted by nurses and acted on by callers in all such cases, the call data suggests that referrals to routine (but not urgent) GP care may have fallen by about a half. If the initial enthusiasm of nurses for the scheme had been maintained, the impact might have been greater still.

In practice, however, since compliance with the triage endpoint is not complete, and nor is there complete substitution of care, actual attendances for routine GP appointments would almost certainly not have fallen to this degree. Although these observations are speculative and based on uncertain data, they do raise the possibility that a more vigorous and sustained implementation of the pharmacy scheme could

have a small, but worthwhile, effect in reducing the number of NHS Direct callers who go on to visit their GP.

Why was the pilot scheme only partially implemented? Our answers to this question can be only tentative, since this was not an explicit research goal and we have limited data on which to base any conclusions. However, the interviews with nurses suggested a number of relevant contributory factors:

- Disagreement with some of the guidelines, alongside a feeling that nurses should have been involved with revising the system;
- Unclear rationale for the advice to visit a pharmacist, both in a general sense (what can the pharmacist offer?) as well as in specific guidelines;
- Uncertainty over the role of pharmacists, which could not be reduced with experience because of the lack of an effective system of feedback from pharmacists (or audit with pharmacists) over whether specific referrals were indeed appropriate;
- A lack of clarity over when a visit to a pharmacist was advised as being in place of a visit to their GP, rather than as being additional to self-care;
- In cases where the pharmacy visit appeared optional, a concern on the part of nurses to balance the potential benefits of any visit against the degree of inconvenience or cost entailed for the patient.

Interestingly, many of these issues had been clearly identified as concerns before the pilot scheme began, during the preparation of nurse training materials for the scheme. A news story describing nurse concerns prior to the scheme reported: 'The lack of confidence in pharmacists was linked to concerns about their competence and training. Nurses also had a very patchy knowledge of the range of services that community pharmacies can provide. Nurses are anxious that the type of advice given by other healthcare professionals is consistent with what they are saying... There was an issue about confidentiality, tied up with the care setting of a busy shop.'²⁶

That these issues remained prevalent among nurses six months after the scheme became operational, to the extent that the pharmacy disposition was only partially implemented in practice, suggests that whatever training the nurses may have received for the scheme had not allayed their fears.

10.2 Undertaking the evaluation

There were some difficulties in undertaking this evaluation which weakened our ability to draw firmer conclusions. The partial implementation of the scheme, with the ensuing inaccuracy of the software records, created difficulties in sampling the appropriate callers for surveys and transcripts. However, this could not have been known in advance, nor indeed might it have become known in the absence of our

evaluation, since neither the system records nor our regular communications with the site gave any clue as to the partial implementation of the scheme in practice.

There were other difficulties unrelated to the scheme's implementation. First, we were able to gain ethical approval for the study in only three of the five ethics committee areas in time for the data collection to go ahead. Changes to the national rules on ethical approval mean that local approval need not be obtained in future for studies of this sort. In addition, nurse practice in obtaining consent from callers changed between our first and second surveys, creating some difficulty in ensuring that the two samples were comparable.

10.3 Implications for policy

The evaluation has raised a number of issues about the policy which is to be implemented. The evidence suggests that there is a willingness on the part of both NHS Direct nurses and community pharmacists to see a greater role for pharmacy in the system of first contact care, in principle, but that there are reservations over how this should operate in practice.

Much of the uncertainty revolves around nurse and public perceptions of the abilities, skills and possible roles of pharmacists. The question of who takes responsibility for immediate and continuing care, and who is accountable for the quality of care, is uncertain. While there is a sense in which NHS Direct may "refer" a patient to their GP or to an A&E department, it is not so clear – and was not clear to the nurses in this scheme – that one can "refer" to a pharmacist. Nurse anxieties over the prospect of referring to a pharmacist centred on issues of clinical skills (can pharmacists diagnose a rash?), the environment in which care was provided (is there privacy?) and potential competing provider incentives (to sell a product to the patient). Although, formally, NHS Direct does not in any case refer, but simply advises patients on a course of action they might take, this is a subtle distinction and one not always clear in the minds of nurses or indeed the public. The lack of nurse experience of community pharmacy means that these ambiguities cannot be clarified by the nurse by reference to her or his experience.

Similarly, the benefits of the scheme to the caller and the NHS are clear in principle, but less obvious in practice. For the caller, our evaluation did not show any measurable benefits in terms of satisfaction or enablement, though this is not proof that there were none. It is likely that callers found using their local pharmacy more speedy and convenient than a GP visit, and satisfaction with the advice received was generally high. In our caller sample, over two-thirds of those visiting a pharmacy bought a product, and this may indicate that in the public mind, as well as the nurses' mind, the pharmacist is associated more with the provision of medication than of diagnosis or advice. Concerns over privacy were also present in the minds of callers.

For the NHS, reducing pressure on GP surgery time is a major objective of the policy. As we have discussed above, there is some evidence in this study, and from others, to suggest that this may be realisable, although there is no one-to-one substitution of pharmacists for GP care since one-third of those who spoke to the pharmacist in this study were referred on to their GP.

10.4 Implications for future implementation of the scheme

The findings of this evaluation of the pilot project suggest a range of possibilities for increasing the likelihood of successful implementation of the scheme as it is rolled out nationally. We have suggested the following points to the central project team and partner agencies as priorities for action. We believe these may already have been taken forward in the context of the national roll-out of the scheme.

- 1) Revision of the triage protocols for referral to pharmacy (required in any case for the new CAS system), to ensure:
 - a) Involvement of NHS Direct nurses alongside pharmacists and GPs in the revision team;
 - b) Provision of a rationale within the software for the advice to visit a pharmacist, for both nurse and caller.
- 2) Review of NHS Direct nurse training, in the light of identified nurse concerns and uncertainties, and consideration of how newly recruited nurses receive training on the pharmacy scheme and the skills and roles of community pharmacists:
 - a) one possibility is a short nurse placement in community pharmacy during induction;
 - b) training may also need to be ongoing.
- 3) Ensuring a specific focus on pharmacist referral and the involvement of pharmacists in clinical audit activities in NHS Direct.
- 4) Consideration as to how to strengthen the system of pharmacist feedback to NHS Direct.
- 5) Revision of the software system to ensure that the actual advice given to the caller can be accurately logged.

11. ACKNOWLEDGEMENTS

The authors would like to thank staff of Essex NHS Direct sites for their considerable help and patience in supporting this research. In particular we would like to thank Linda Wells, Jeni Reed, Sandra Haines, Maggie Blundell, David Oxley and Ash Pandya for their invaluable assistance with data collection.

This study was funded by the Department of Health. The views expressed are those of the authors and not necessarily those of the Department of Health.

12. APPENDIX: COMMENTS OF RESPONDENTS TO THE CALLER SURVEYS

Respondents were asked to write down anything else about their experience of using NHS Direct that they wished to add to the questionnaire. Over one-third of respondents made written comments about NHS Direct: 42% (338/810) before the pharmacy scheme and 35% (517/1460) after the scheme (see Table 12-1).

Respondents mainly made positive comments. These comments were about the service offered by NHS Direct, the reassurance gained, or the helpfulness of the staff – both operators and nurses. Negative comments were mainly about having to wait too long for a nurse to call them back, lacking confidence in the advice given, or being asked ‘too many’ questions. Comments were similar to those made by callers to the first wave sites.⁴ Example comments are given below.

Table 12-1: Written comments on NHS Direct before and after the scheme

	Before	After	Total
	%	%	%
Positive comments			
Good service	40	43	42
Reassuring advice/staff/service	25	25	25
Understanding/helpful/friendly staff	25	21	22
Avoids wasting time of GP/A&E	10	9	9
Alternative to busy/poor GPs	5	8	7
Good out-of-hours service	5	6	5
Prompt	2	3	3
Found serious problem	1	3	2
Service referred to was good	2	2	2
Negative comments			
Long wait to speak to a nurse	5	3	4
Nurse did not know/gave wrong answer/over-triaged	4	5	4
Asked too many questions	3	3	3
Waste of time/unhelpful	2	4	3
Service referred to was not good	2	4	3
Publicise it more	1	1	1
Other e.g. wanted GP, service referred to did not like NHS Direct, poor staff attitude	10	5	7
Total N=100%	338	517	855

Percentages sum to over 100% because some callers made multiple points

12.1 Good service

I think it was great and very helpful. Thank you. (BEFORE)

I was very impressed with the service. (BEFORE)

I called regarding my (then) xx month old daughter. I found the service very helpful and friendly. I will not hesitate to call again if I have a problem with myself or any of my family. Thank you for being there. (BEFORE)

I find the service very useful, helpful and sympathetic. I have used NHS Direct a few times now and use it as a first port of call before getting in touch with the doctor. Thanks for your help and advice. I have recommended the service to friends, family and colleagues. (AFTER)

This was the first time I called NHS Direct. My sister had told me that it is a very good service with plenty of time for advice to give. I certainly found it helpful and will if needed again in the future, call again, but hopefully I will never have to. Thank you. (AFTER)

12.2 Reassuring

They were really helpful and understanding. I was really worried about my baby, but they reassured me and told me exactly what to do for him. It's an excellent service - keep up the good work! (BEFORE)

I find it very reassuring to be able to speak to someone directly when worried about my daughter's or my health. The advice given was excellent and it meant I did not have to take my daughter out to a GP or hospital which would have been very difficult with her illness on that day. I will definitely use this service again for advice. It is especially useful in that I did not have to wait to see a doctor nor call one out to my home unnecessarily. (BEFORE)

I have used the service previously for my children and have always been reassured by the advice given. It is particularly useful where children are concerned to have someone who can give you advice any time of the night or day. An extremely useful service. (AFTER)

I was looking for reassurance that what I was doing was correct. The nurse was great and kept a minor problem in proportion. (AFTER)

12.3 Understanding staff

It was the first time I had used this service and I was very pleased with the information and advice the nurses gave me. They were both kind and patient, I would consider contacting them over my own surgery who are always busy. (BEFORE)

I thought everyone was very helpful, polite and understanding. It's good to know that when people need help and reassurance and advice they have someone to call. (BEFORE)

Found the service to be very user friendly. Also it was nice to have someone talk to you as a human being! The staff were very friendly even though it was the middle of the night and came over as if they really cared. Overall I have nothing but good things to say about your service. Please keep it going. (BEFORE)

In all cases – I have phoned four times – the nurses have been wonderful, extremely calm, clear and understanding. NHS Direct is my first port of call in an emergency and dealing with day to day queries. It is an excellent service. (AFTER)

I found the nurse that I spoke to very friendly and understanding. She was competent and thorough as well. Thank you for the service. (AFTER)

12.4 Long wait to speak to a nurse

I had to wait nearly an hour for a nurse to call me back. (BEFORE)

Made first call and was told there was a queuing system to speak to nurse. Had to make second call about 1 hour later, still had to wait, and they called me back about 20 minutes later. 1 hour 20 minutes is a long time to get advice. (BEFORE)

I cannot say I was very satisfied with the service I received. It took ages to get through then was told a nurse will phone back. I phoned them twice to make sure I was not forgotten. I was reassured I had not been. The nurse finally phoned over an hour later. I just think that when you do phone you should get serviced straight away by a nurse. I was worried. I spent a lot longer being fretful than I should have. (AFTER)

12.5 Lack of confidence in advice

NHS Direct advised using a cream for (a rash). I think it was a hydrocortisone cream/steroid cream. The pharmacist told me that this was highly inadvisable...so wrong information was given. The nurse at NHS Direct was clearly reading the advice from a book. She actually read bits out. I don't feel I would use NHS Direct other than for very minor ailments. (BEFORE)

The person looked in a book and did not seem to be able to establish what my condition was. I felt I knew more about it than them. (AFTER)

12.6 Too many questions

I have rung NHS Direct several times now and have been happy with advice I have finally been given from the nurse. The main area that concerns me is the problem of having to repeat myself several times after being transferred from person to person on the phone. I find this very annoying as I can hear fingers tapping my details on to their computer screen, yet I find myself have to give these very same details all over again. Surely the staff must be able to pass these messages on to nurse etc. This is a reason why next time I may consider that this lengthy process is practically a waste of time and that it will be quicker to phone a doctor instead. (BEFORE)

Felt that you spent too much time asking me questions about myself i.e. age, live, previous illness etc, instead of trying to re-assure me about the reason I had called. (BEFORE)

No comment, a lot of fuss about a simple inquiry. (AFTER)

13. REFERENCES

- 1 Department of Health. *The New NHS: modern, dependable*. Cmd 3807. London: The Stationery Office, 1997.
- 2 Calman K. *Developing emergency services in the community: the final report*. London: NHS Executive, September 1997.
- 3 Scottish Executive. *It's NHS 24 – Deacon announces details of new 'all day, every day' NHS phone service*. Press release SE3208/2000. Edinburgh: Scottish executive, 13 December 2000.
- 4 Munro J, Nicholl JP, O'Cathain A, Knowles E. *Evaluation of NHS Direct first wave sites: first interim report to the Department of Health*. Sheffield: Medical Care Research Unit, 1998.
- 5 Munro J, Nicholl JP, O'Cathain A, Knowles E. *Evaluation of NHS Direct first wave sites: second interim report to the Department of Health*. Sheffield: Medical Care Research Unit, 2000.
- 6 Munro J, Nicholl JP, O'Cathain A, Knowles E, Morgan A. *Evaluation of NHS Direct first wave sites: final report of the phase 1 research*. Sheffield: Medical Care Research Unit, 2001.
- 7 O'Cathain A, Munro JF, Knowles E, Nicholl JP. How helpful is NHS Direct? Postal survey of callers. *BMJ* 2000;**320**:1035.
- 8 Boseley S. Just hanging on the telephone. *The Guardian*, 9 January 2001.
- 9 Hellen N, Carr-Brown J. NHS phone lines 'put lives at risk'. *Sunday Times*, 3 December 2000.
- 10 Williams S. NHS Direct investigated. *Health Which?*, August 2000: 12-16.
- 11 Mayor M. Health watchdog criticises NHS helpline. *BMJ* 2000;**321**:401.
- 12 Munro JF, Nicholl JP, O'Cathain A, Knowles E. Impact of NHS Direct on demand for immediate care: observational study. *BMJ* 2000;**321**:150-3.
- 13 Department of Medicines Management. *Development of Fourth Disposition in NHS Direct Essex Pilot: an academic review of guidelines*. Keele University, September 1999.
- 14 Hassell K, Noyce PR, Rogers A, Harris J, Wilkinson J. A pathway to the GP: the pharmaceutical 'consultation' as a first port of call in primary health care. *Family Practice* 1997;**14**:498-502.
- 15 Cunningham-Burley S, Maclean U. Pharmacists and primary care: some research findings and recommendations. *Family Practice* 1988;**5**:122-5.
- 16 Tully MP, Hassell K, Noyce PR. Advice-giving in community pharmacies in the UK. *J of Health Services Research and Policy* 1997;**2**:38-50.
- 17 Hassell K. Diverted traffic. *Health Service Journal* 6 January 2000:22-3.
- 18 Secretary of State for Health. *The NHS Plan*. Cm 4818-I, Norwich: The Stationery Office, 2000.

-
- ¹⁹ Department of Health. *Pharmacy in the Future – implementing the NHS Plan*. London: Department of Health, September 200.
- ²⁰ Howie JGR, Heaney DJ, Maxwell M, Walker JJ, Freeman GK, Rai H. Quality at general practice consultations: cross sectional survey. *BMJ* 1999;**319**:738-43.
- ²¹ Howie JGR, Heaney DJ, Maxwell M, Walker JJ. A comparison of a Patient Enablement Instrument (PEI) against two established satisfaction scales as an outcome measure of primary care consultations. *Family Practice* 1998;**15**:165-171.
- ²² Beney J, Bero LA, Bond C. Expanding the roles of outpatient pharmacists: effects on health services utilisation, costs, and patient outcomes. *Cochrane Database of Systematic Reviews*. Issue 3, 2000.
- ²³ Myles S, Wyke S. *Accessing P-class medicines: from the GP or the pharmacist and what are the costs?* Society for Social Medicine Annual Meeting 2000.
- ²⁴ Wearn A *et al.* Pharmacists' views on deregulating emergency hormonal contraception. *Pharmaceutical Journal* 2001;**266**:89-92.
- ²⁵ Heberlein TA, Baumgartner R. Factors affecting response rates to mailed questionnaires: A quantitative analysis of the published literature. *American Sociological Review* 1978;**43**:447-462.
- ²⁶ NHS Direct nurses lack confidence in 'retail' pharmacy. *Chemist & Druggist*, 18/25 December 1999: 6.