



**Exploring Innovation in
Pharmacy Practice:
A Qualitative Evaluation
of Supplementary Prescribing
by Pharmacists**

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Table of Contents

Glossary of Terms	iii
1. Executive Summary	vii
2. Introduction	1
3. Methodology	2
4. Patient Advisory Group	4
5. Phase 1: Pharmacist Interviews	6
5.1 Method	6
5.2 Data Collection	7
5.3 Results	7
5.3.1 Participants	7
5.3.2 Analysis of Phase 1 Data	9
5.4 Findings of Phase 1	9
5.4.1 Pharmacists' experiences prior to entering SP training	9
5.4.2 The Pharmacists' Experiences of Training	11
5.4.3 Extrinsic factors: getting practical structures in place	13
5.4.4 Intrinsic factors affecting pharmacists' role	24
5.4.5 Reality of the Supplementary Prescribing Role	28
5.4.6 Future Practice	36
5.5 Discussion: Phase 1	38
6. Phase 2: Case Studies	40
6.1 Method	40
6.2 Data Collection	40
6.3 Results: Phase 2	41
6.3.1 Participants	41
6.4 Findings of Phase 2	43
6.4.1 Doctors' Views on Being a DMP	43
6.4.2 The Relationship between Doctors and Pharmacists	44
6.4.3 Relationship with Other Health Care Professionals	46
6.4.4 Conflict: defining the boundaries of care	48
6.4.5 Working in a Multi-Disciplinary Team	49
6.4.6 Patient Consultations	50
6.4.7 The Clinical Management Plan (CMP) in Practice	54
6.4.8 Clinical Governance in Practice	57
6.4.9 Responsibility and Accountability	59
6.4.10 Effects of Supplementary Prescribing on Doctors	61
6.4.11 Benefits to Patient Care	62
6.4.12 Future Pharmacy Practice	65
6.5 Diary Study	67
6.6 Discussion: Phase 2	71
6.6.1 The Importance of Understanding	72
6.6.2 The Importance of Communication	73
6.6.3 The Importance of Knowledge and Skills	74
6.6.4 The Importance of Structure	76
7. Conclusions	77
8. References	81
Appendix 1 – Economic Report	83
A. Summary of Research Recommendations	85
B. Introduction: What does an Economic Perspective Offer?	86
C. Policy Context: Setting the Scene	87
D. Economic Evaluation of Training for Supplementary Prescribing	87
E. Economic Evaluation of Supplementary Prescribing Practice	89
F. Incorporating Patients' Evaluation of Benefits	93

G. Infrastructure and Support for Supplementary Prescribing	94
H. Concluding Comments	95
I. Glossary	96
J. References	97
Appendix 2: Issues Noted by Patient Advisory Group	98
Appendix 3: Examples of CMPs	101
Appendix 4: Observation of Patient Consultations	109
Appendix 5: Case Study Participants	110
Appendix 6: Patient Advisory Group – Communication Issues	113

Glossary of Terms

British National Formulary (BNF)

Published twice a year by the British Medical Association and the Royal Pharmaceutical Society of Great Britain, the BNF provides practical information on the selection and clinical use of medicines and guidance on prescribing, dispensing and administering medicines.

Clinical Governance

A framework through which the NHS is accountable for continuously improving the quality of services. This includes action to ensure that risks are avoided; adverse events are rapidly detected, investigated and lessons learned; and good practice is disseminated.

Clinical Management Plan (CMP)

This is an agreement agreed between the IP and the pharmacist prescriber about the management of an individual patient's condition. The CMP is the foundation stone of supplementary prescribing. Before supplementary prescribing can take place, it is obligatory for an agreed CMP to be in place (written or electronic) relating to a named patient and to that patient's specific condition(s) to be managed by the supplementary prescriber.

Co-morbidity

Refers to the presence of one or more disorders (or diseases) in addition to a primary disease or disorder. Also looks at the effect of such additional disorders or diseases. In medicine, comorbidity describes the effect of all other diseases an individual patient might have other than the primary disease of interest. There is currently no accepted way to quantify such comorbidity.

Community Pharmacist

A pharmacist who works in a (high street) pharmacy or 'chemist shop'. Community pharmacists usually provide health care services (e.g. dispense prescriptions, sell over-the-counter medicines) in a retail environment. Community pharmacies may be owned by companies (e.g. Boots or Lloyd's) or may be independently owned by individual pharmacists ('independent' pharmacies).

Continuing Professional Development (CPD)

Pharmacists (like other health professionals) must keep up to date with changes in pharmacy practice, the law relating to pharmacy and the knowledge and technology applicable to pharmacy, and must maintain competence and effectiveness as a practitioner. This responsibility is recognised in the Royal Pharmaceutical Society's Code of Ethics. The Society recommends that pharmacists fulfil this responsibility by adopting the concept of continuing professional development (CPD). This will include regular participation in continuing education (CE) and other activities, e.g., professional audit.

Criminal Records Bureau (CRB) check

The Criminal Records Bureau implemented a disclosure service to provide criminal record checks for all people who come into contact through their work with children, the elderly or other vulnerable people. It enables organisations in the public, private and voluntary sectors to make safer recruitment decisions by identifying candidates who may be unsuitable for certain work, especially that involving children or vulnerable adults.

Crown Report

In March 1999 this task group, led by Dr June Crown, proposed that there should be two new classifications of prescriber (dependent and independent) The report recommended that independent prescribers would assess patients and make diagnoses and prescribe, while dependent prescribers would be responsible for continuing care of patients previously diagnosed by independent prescribers. The report noted a difference between prescribing in the sense of writing prescriptions and in authorising supplies at National Health Service expense.

Designated Medical Practitioner (DMP)

A DMP is a doctor who is responsible for assessing whether the learning outcomes of pharmacists training as supplementary prescribers have been met and whether the trainee has acquired certain competencies. The DMP must be a registered medical practitioner who has normally had at least three years recent clinical experience for a group of patients / clients in the relevant field of practice. The DMP must also have the support of the employing organization or GP practice to act as the DMP. Once the pharmacist supplementary prescriber has completed their training the DMP usually becomes (but is not necessarily) their independent prescriber.

Electronic Medical Records (EMR)

A medical record is essentially a chronology of a patients' medical history. Being a legal requirement, medical records are used by health professionals to monitor patients' health; they may also be used to monitor the health behaviours of practitioners, and communicate crucial confidential patient information between health care providers. Patients retain a degree of control over their own medical records - a GP, for instance, may only release information to third parties with the consent of the patient. An electronic medical record is this record in electronic or computerised format.

There will be two interrelating types of electronic record:

EPR (Electronic Patient Record) - A record of periodic care delivered mainly by one organisation, for instance an acute hospital or a specialised unit such as mental health.

EHR (Electronic Health Record) - A lifelong record of a patient's medical and health; information about a patient's contact with primary care and information derived from the EPR will also be included.

General Medical Services (GMS) contract

A contract between Primary Care Organisations (e.g. PCTs) and an individual primary care practice, governing services provided by the practice (under national agreements). It also covers payments for these services. The new contract was accepted by GPs in June 2003.

General Practice Administration System for Scotland (GPASS)

GPASS is the national Primary Care administration system for Scotland and is one of Britain's leading general practice systems. It is used in over 890 Scottish practices and has been adopted by a range of commercial and public organisations. GPASS was established in 1984, and is now used in over 84% of practices in Scotland. The GPASS system has been successfully and comprehensively redeveloped as a Windows based clinical system.

Independent Prescriber (IP)

This must be a doctor (or dentist) and is the person who makes the diagnosis, and

works in the same setting as the supplementary prescriber. A supplementary prescriber will work alongside this person, and they should also provide mentoring/support of the supplementary prescriber as required.

Independent prescribing

This term applies to a prescriber who is legally permitted and qualified to prescribe and take the responsibility for the clinical assessment of the patient, establishing a diagnosis and the clinical management required.

Local Research Ethics Committee (LREC)

A local committee which approves research projects on ethical grounds.

Multi-centre Research Ethics Committee (MREC)

A committee which approves multi centre research projects on ethical grounds.

NHS Care Record Guarantee

The NHS Care Record Guarantee sets out the rules governing information held in the NHS Care Records Service - a nationwide patient health record system - which will begin rolling out across England from 2006. The Guarantee makes 12 commitments to patients about their records, including the following pledges:

- Access to records by NHS staff will be strictly limited to those having a 'need to know' to provide effective treatment to a patient
- In due course, patients will be able to block off parts of their record to stop it being shared with anyone in the NHS, except in an emergency
- Individuals will even be able to stop their information being seen by anyone outside the organisation which created it - although doing so may have an impact on the quality of care they receive.

OSCE

Objective Structured Clinical Examinations. This is a way of assessing history-taking, physical examination and consultation skills. It involves the performance of a 'mock' clinical consultation, frequently with an actor as patient.

Prescription Pricing Authority (PPA)

The PPA is a Special Health Authority within the NHS. The PPA processes every NHS prescription that is dispensed by any community pharmacy and dispensing doctor in England.

Primary Care

Traditionally understood to comprise the health care services provided by general practitioners and associated health care professionals. Community pharmacy is included within the primary care sector but for the purposes of this document is referred to separately.

Primary Care Trusts (PCTs)

PCTs are responsible for the planning and securing of health services and improving the health of the local population. For example, PCTs ensure there are enough GPs to provide for their population and that they are accessible to patients. In addition, they are responsible for integrating health and social care so the two systems work together for patients.

Royal Pharmaceutical Society of Great Britain (RPSGB)

The Royal Pharmaceutical Society of Great Britain (RPSGB) is the professional and

regulatory body for pharmacists in England, Scotland and Wales. It also regulates pharmacy technicians on a voluntary basis, which is expected to become statutory under anticipated legislation. The primary objectives of the Society are to lead, regulate, develop and represent the profession of pharmacy.

Secondary Care

Specialist care, usually provided in hospital, after a referral from a GP or health professional.

‘Smart’ Card for doctors

The NHS Occupational Health Smart Card (OHSC) database contains central records for some 47,000 NHS hospital doctors, made up of around 35,000 in training grades along with consultants, locums and other medical staff. There are around 42,000 cards in circulation across the NHS and the software has been installed at 232 NHS trusts.

Doctors' personal and health clearance data are recorded onto the smartcards which remove the need for time-consuming transfer procedures. When a doctor arrives at a new post, identity and pre-employment checking information such as health clearance, GMC registration status and criminal records data stored on the card can be verified through a central NHS database.

‘Smart’ card for patients

A proposed scheme which would provide a card for patients containing details of a patient's medical record and prescription requirements. It would effectively allow patients to hold details of their personal medical history.

Supplementary prescribing

Previously referred to as ‘dependent prescribing’ this will allow specified other health care professionals to prescribe for patients with more complex conditions such as chronic diseases and mental illness, after initial assessment of the patient by a doctor. Pharmacists and nurses are the two first professional groups to be allowed to do supplementary prescribing.

Supplementary Prescriber (SP)

This must be a registered nurse, registered midwife or registered pharmacist, who has undertaken a relevant and approved training course to allow them to practice as a Supplementary Prescriber.

‘Vision’

Clinical Management Software used in primary care. It can be deployed in the practice or from a central server location. Vision is enabled to meet the requirements of the NHS Care Records Service.

1. Executive Summary

Background

Supplementary prescribing enables pharmacists and other health care professionals to prescribe once a patient has been initially assessed by a doctor acting as an independent prescriber. The first pharmacist supplementary prescribers completed their training and were able to prescribe from March 2004.

Objectives

This project sought to explore how this role works in practice and the factors which contribute to successful and unsuccessful pharmacist prescribing practice. Specific objectives were (1) To explore the nature and development of the supplementary prescriber's relationships with patients and other members of the health care team including their designated medical practitioner (DMP), other health professionals and work staff (2) To explore the patient's perspective in how they perceive the role of pharmacists as supplementary prescribers (3) To discover how the supplementary prescriber (SP) sees the development of their own role as a pharmacist, such as their job satisfaction, the professional status of the changing nature of their work and their attitude to clinical responsibility and accountability (4) To investigate the role of formal and informal training in their development as a SP (5) To identify the external factors that enhance or detract from their role as an SP.

Method

The research comprised two phases: a semi-structured interview phase with pharmacist supplementary prescribers and an in-depth case study phase exploring how supplementary prescribing has worked from the perspective of patients, pharmacists, doctors, administrators and other health care professionals working within the case study prescribing setting.

Data Sources

Data was collected using interviews with pharmacist supplementary prescribers (phase 1), interviews with doctors, pharmacists, other health care professionals, administrators and patients (phase 2), observation of pharmacist-patient consultations (phase 2), a diary study with one community pharmacist and a documentary review of pharmacists' clinical management plans (phase 1 and 2).

Participants

23 pharmacists trained as supplementary prescribers were interviewed for phase 1. Five case study sites were visited for phase 2. This included interviews with five doctors (independent prescribers), 2 other doctors working within the prescribing setting, 5 pharmacists, 3 nurses, 4 administrative and other staff, 10 patients (2 by telephone) and the observation of 15 pharmacist-patient consultations. A diary study was conducted at a 6th site with a community pharmacist who was not yet prescribing.

Key Findings

The pharmacist supplementary prescribers embraced the challenges and benefits of supplementary prescribing to break new ground in the professional development of pharmacy. They found the role particularly rewarding as they felt better able to use the clinical knowledge and skills they had been taught. This potentially atypical group of respondents may not be representative of future supplementary prescribers as it becomes more widespread. Pharmacist supplementary prescribers perceived that there were clear benefits of their role for patients in terms of the increased time and greater level of medicines information they provided when compared with their medical colleagues. However, there was a general lack of awareness and understanding of the supplementary prescribing role by both patients and other health

care professionals in the pharmacists' prescribing setting. For supplementary prescribing to work in practice, data from the interviews suggested that good communication - between health care professionals and between professionals and patients - was vital when adding an additional health care professional role to an already complex primary or secondary care health care system. In terms of training, pharmacists felt clinically competent to prescribe within their clinical areas and, overall, that their supplementary prescribing training had been of benefit. Clinical examination skills were the area where pharmacists felt least competent while the practice-based element of their training was perceived to be the most valuable. Where pharmacists had successfully integrated into their new role, there was a clear recognition of the pharmacists' knowledge and skills by other health professionals. Several trained pharmacists were not yet prescribing having experienced structural or organisational difficulties when trying to implement their role. The use of the Clinical Management Plan (CMP) also varied from setting to setting with some respondents having a poor understanding of the clinical governance issues surrounding their implementation and use.

Recommendations

Although these respondents welcomed the challenges of their role, they nonetheless encountered some difficulties in becoming a supplementary prescriber. It is from this perspective, and the perspective of other professionals and patients involved in this research, that we would offer the following recommendations:

i) Implementation of Supplementary Prescribing.

For supplementary prescribing to be effective, there needs to be support for training and support for the practical processes that make supplementary prescribing work at ground level. This might include computer access and prescription printing but would also include procedures to identify lines of professional responsibility and accountability. This requires action by pharmacists, their employers and health care policy makers to ensure that the transition into supplementary prescribing practice is both workable and effective.

ii) Supplementary Prescribing in Community Pharmacies.

Community pharmacists wishing to practise as supplementary prescribers have particular obstacles to overcome including difficulties with medical record access, physical distance from the independent prescriber and lack of funding to provide this service. For these reasons, community pharmacists may need additional support (financial, development of contacts and IT) from the local PCT to facilitate supplementary prescribing in the community pharmacy sector.

iii) Supplementary prescribing and Patient Centred Care.

The Department of Health's aims for supplementary prescribing include greater use of the pharmacist's skills, improved access to medicines for patients and a decrease in GP workload. The qualitative nature of this study meant we are unable to comment on the latter two, but we did find evidence that supplementary prescribing encouraged greater use of the pharmacist's skills. However, supplementary prescribing does have the potential to fragment care as supplementary prescribing has developed, in some settings, with pharmacists running single condition disease management clinics (e.g. hypertension clinics). Patients with multiple conditions may be disadvantaged in this supplementary prescribing model and need to consult multiple prescribers for different aspects of their clinical care. In this sense, supplementary prescribing can be seen as being at odds with patient centred care and a 'patient-led' NHS, instead being designed around the health care system and the capabilities of different professional groups.

- iv) *Greater Awareness of Supplementary Prescribing.*
There needs to be greater publicity surrounding the benefits and rationale behind supplementary prescribing. Both patients and professionals expressed a lack of awareness of what supplementary prescribing entails and how this could be applied in their practice setting. Professional bodies, local NHS service providers and the government all have a role in increasing public awareness of supplementary prescribing.
- v) *Patient Information about Supplementary Prescribing.*
Patients were not always made aware of the process of supplementary prescribing before going to see the pharmacist. Patients need to be told what supplementary prescribing is, why they have been selected to see a pharmacist, what the potential benefits of supplementary prescribing are, their right to refuse to see a supplementary prescriber (at the outset or at any time later on), what to do if something goes wrong and when, and in what circumstances, it would be appropriate for them to see their doctor. Standardised printed information should be provided to supplementary prescribers to aid this process of improving patient understanding about supplementary prescribing.
- vi) *Documentation for Supplementary Prescribing.*
There was considerable variation in the detail and scope of clinical management plans. The lack of CMPs was notable in some secondary care settings. The role of clinical management plans needs to be clarified to determine whether 'generic' clinical management plans are acceptable practice and whether they are needed at all in secondary care where existing protocols have been in place for a number of years. The legality of these practices needs to be considered before future adverse events arise. Clear guidance at both a national and local level is needed to ensure that practitioners are aware of the limitations and liabilities of their prescribing practices.
- vii) *Ongoing Support for Pharmacist Supplementary Prescribers.*
Several participants expressed a need for continued support after training when new questions about their current practice arose. The support could be provided in the prescribing setting (e.g. from other practitioners in their setting), with other SPs (e.g. an internet-based system) or workshops which reinforce and extend learning on, for example, consultation and communication skills.
- viii) *Lapsing Skills.*
Some of the pharmacists interviewed had not yet begun to use the skills they had learned during their supplementary prescribing training. In the light of this, it is recommended that supplementary prescribers need to begin working as a supplementary prescriber within one year after completing their training, or else they will need to re-train.
- ix) *Independent Prescribing.*
There were concerns expressed in relation to pharmacists and independent prescribing, particularly with regard to pharmacists' lack of diagnostic skills. Some pharmacists were amending computer records yet were unable to print and sign prescriptions. Others were verbally making clear decisions about treatment choice yet were not the person 'signing off' on a prescription or medication chart. Clear lines of responsibility need to be identified with those making the decisions taking responsibility for them. When supplementary prescribing is introduced into a new setting, risk assessment procedures need to be re-appraised to ensure that patient safety is at the centre of the care provided. Independent prescribing may be less about the facility to prescribe in a

range of clinical areas but rather that (1) pharmacists act within their professional competence and (2) that there are clear lines of responsibility and appropriate risk management systems in place and (3) that the procedures and systems of work surrounding it are made explicit and transparent.

2. Introduction

Supplementary prescribing is defined as ‘a voluntary partnership between an independent prescriber (doctor or dentist) and a supplementary prescriber to implement an agreed patient-specific Clinical Management Plan (CMP) with the patient’s agreement. The independent prescriber is responsible for the assessment of patients with undiagnosed conditions and decisions about the clinical management required, including prescribing. The supplementary prescriber (formerly called the dependent prescriber) is responsible for the continuing care of patients who have been clinically assessed by an independent prescriber. In 2003, supplementary prescribing was extended to nurses and pharmacists. In February 2004, the first pharmacists registered as supplementary prescribers (Anonymous, 2004). In 2005 supplementary prescribing was extended to chiropodists, physiotherapists, radiographers and optometrists. The focus of this report is on supplementary prescribing by pharmacists only.

Pharmacists are a heterogenous group but are conventionally described as working within three distinct sectors of practice. For simplicity, we refer to community pharmacists as those whose main job is as an employee of a company owning a chain of pharmacies (e.g. Boots or Lloyds) and those who own, or are employed in, an independently owned pharmacy or ‘chemist shop’. Community pharmacists can work as a supplementary prescriber within their pharmacy or they may undertake sessional work (a ‘session’ usually equates to a half day) for one or more general practices. Primary care pharmacists are those whose main job is an employee of a Primary Care Trust (PCT) or whose main job is working directly as a practice-based pharmacist in one or more general practices. Those working for a PCT may have a managerial role, for example monitoring prescribing across all general practices in the PCT, but also work on a sessional basis in individual general practices as a supplementary prescriber. Hospital pharmacists work within the secondary or tertiary care sector as a supplementary prescriber. This complexity in workplace arrangements for supplementary prescribing is likely to influence how supplementary prescribing has developed in the different settings.

In the Department of Health’s guide to implementing supplementary prescribing, they outline the aim of supplementary prescribing:

is intended to provide patients with quicker and more efficient access to medicines, and to make the best use of the clinical skills of eligible professionals. Over time, supplementary prescribing is also likely to reduce doctors’ workloads, freeing up their time to concentrate on patients with more complicated conditions and more complex treatments. Time spent initially developing a simple clinical management plan (CMP) should be time saved when the patient returns for review to the supplementary prescriber rather than the doctor (Department of Health, 2005a).

Improving access, improving NHS services, making better use of pharmacists’ skills and reducing GP workload are the health policy drivers behind the development of supplementary prescribing. A key element of pharmacist supplementary prescribing is the clinical management plan (CMP). A CMP must be in place before prescribing can occur (Department of Health 2005a). It relates to a named patient and the specific clinical conditions which are to be managed by the supplementary prescriber. The CMP contains information such as the types of medicines to be prescribed, restriction or limitations to the prescribing of the medicines, relevant warnings and the circumstances in which the supplementary prescriber should refer to, or seek the advice of, the doctor or dentist who is party to the plan.

Prescribing by pharmacists is not unique to the UK. Since the 1960s there have been initiatives in the USA involving pharmacist prescribing, using protocols agreed with a physician (Farrell, North-Lewis & Cross, 1997). In the model which most closely equates to supplementary prescribing, pharmacists take the role of dependent prescriber, with shared responsibility for patient care with a physician who has delegated prescribing privileges to a pharmacist in whom they have confidence (Galt, 1995). Collaborative drug therapy management, with its emphasis on interdisciplinary professional working, has been recognised as a way of increasing patient's health-related quality of life, help prevent avoidable drug-related problems and improve the benefits to society from medication (Carmichael, O'Connell, Devine *et al.*, 1997). In this sense, supplementary prescribing by pharmacists can be seen as sharing many of the features of US collaborative drug therapy management, with the stipulation that UK clinical management plans must be developed on an individual patient basis.

To become a supplementary prescriber a pharmacist must undertake additional training on an approved supplementary prescribing course which addresses the learning outcomes identified by the Royal Pharmaceutical Society of Great Britain. As of November 2005, 30 universities had been approved to offer supplementary prescribing courses. For NHS employees, places on a supplementary prescribing course are funded by the pharmacist's local Workforce Development Directorate. Initially it was hoped that several hundred pharmacists would be trained as supplementary prescribers by the end of 2004. By September 2005, there were 635 pharmacists registered as supplementary prescribers. While the number of pharmacist supplementary prescribers is growing, it still represents a small proportion of the approximately 42,000 registered pharmacists residing in England, Wales and Scotland. Clearly, an investigation into why these pharmacists became supplementary prescribers, and the factors which facilitated or hindered this process, is timely.

The *aims* of this project were: (1) To describe how the role of a supplementary prescriber works in practice and (2) To explore the factors which contribute to successful and unsuccessful supplementary prescribing practice. The project's objectives are provided in Box 1.

Box 1: Project Objectives

1. To explore the nature and development of the supplementary prescriber's relationships with patients and other members of the health care team including their designated medical practitioner (DMP), other health professionals and work staff.
2. To explore the patient's perspective in how they perceive the role of pharmacists as supplementary prescribers.
3. To discover how the supplementary prescriber (SP) sees the development of their own role as a pharmacist, such as their job satisfaction, the professional status of the changing nature of their work and their attitude to clinical responsibility and accountability.
4. To investigate the role of formal and informal training in their development as a SP.
5. To identify the external factors that enhance or detract from their role as an SP.

3. Methodology

Modified Grounded Theory

In order to understand pharmacists' perceptions of factors affecting the development of their role as supplementary prescribers, qualitative research adapted from the grounded theory method was chosen (Strauss & Corbin, 1998). The value of using a

qualitative research method such as grounded theory is embedded in the subjective nature of pharmacists' views on the development of their new role. As a descriptive study, a qualitative approach, with an emphasis on understanding factors modifying pharmacists' responses to supplementary prescribing seemed logical. Grounded theory is a theory that is derived from data, systematically gathered and analyzed through the research process (Strauss & Corbin, 1998).

The aim of grounded theory is to generate rather than verify theory (Glaser, 1976). The researcher's purpose in using grounded theory is to explain a phenomenon from within a particular situation itself and to identify the inherent processes operating within it (Baker, 1976). Grounded theory seeks to develop theory that is grounded in data systematically gathered and analysed. According to Martin and Turner (1986), grounded theory is "an inductive, theory of discovery methodology that allows the researcher to develop a theoretical account of the general features of a topic while simultaneously grounding the account in empirical observations or data." The major difference between grounded theory and other methods is its specific approach to theory development - grounded theory suggests that there should be a continuous interplay between data collection and analysis.

In effect, grounded theory works by encouraging simultaneous analysis. Both analysis and data collection inform each other. The analysis process is systematic and ends when new data no longer generates new insights. This has been also described as 'category saturation' (Field, 1991; Chenitz, 1986).

Case Study Methodology

Case studies were chosen as a useful methodology for exploring the views of pharmacist prescribers and those working with them, as they allow for a more in-depth investigation (Feagin, Orum & Sjoberg, 1991). Case studies have been used in varied types of investigations, particularly in sociological studies. They are designed to bring out details from the viewpoint of the participants by using multiple sources of data. Case study methodology can be used as a creative alternative to traditional approaches to description, emphasising the patient's perspective as being central to the process. Contemporary practitioners and researchers have come to appreciate the subjective richness of patients recounting their experience and the meanings implicit in them to help guide practice.

There are multiple definitions and understandings of the case study. According to Bromley, it is a "systematic inquiry into an event or a set of related events which aims to describe and explain the phenomenon of interest" (1990 p. 302). The unit of analysis can vary from an individual to a corporation. While there is utility in applying this method retrospectively, it is most often used prospectively. Data come largely from documentation, interviews, direct observations, participant observation and physical artefacts (Yin, 1994). The key features of a "case study" are its scientific credentials and its evidence base for professional applications. Case studies of individual patients often involve in-depth interviews with participants and key informants, review of the medical records, observation, and excerpts from patients' personal writings and diaries.

Yin (1993) has identified some specific types of case studies: *Exploratory*, *Explanatory*, and *Descriptive*. Exploratory cases are sometimes considered as a prelude to social research. Explanatory case studies may be used for doing causal investigations. Descriptive cases require a descriptive theory to be developed before starting the project.

Case study evaluations are valuable where broad, complex questions have to be addressed in complex circumstances. No one method is sufficient to capture all salient aspects of an intervention, and case studies typically use multiple methods.

The methods used in case studies may be qualitative or quantitative, depending on the circumstances. Case studies using qualitative methods are most valuable when the question being posed requires an investigation of a real life intervention in detail, where the focus is on how and why the intervention succeeds or fails, where the general context will influence the outcome and where researchers asking the questions will have no control over events.

Economic Report

One of the purposes of this research was to identify avenues of future research into supplementary prescribing from an economic perspective. Preliminary research findings were sent to the University of Leeds for consideration and review by an economic consultant. The report provided by the economic consultant is provided in Appendix 1.

Data Sources

The report draws on information from the main sources of our research:

- semi-structured interviews with pharmacists across England and Scotland between January and May 2005.
- semi-structured interviews with key informants (professional, administrative and patient) in five case study areas conducted between April and August 2005.
- Observations of patient – pharmacist consultations at the five case study sites.
- Documentary review of clinical management plans (CMPs) used by pharmacist prescribers.
- A diary study of one non-prescribing community pharmacist and the process of developing supplementary prescribing in the community setting.

Semi-structured one-to-one interviews were conducted with pharmacists in their work setting after initial agreement had been gained (see description of recruitment process below) This first round of interviews was followed up between April and August with more in-depth interviews in five case study areas (see case study section below).

4. Patient Advisory Group

Changes in pharmacy practice that may result from this research should benefit patients in all settings, thus patients are regarded as the major stakeholder in this project. To ensure that the views of patients could be taken into account throughout the lifetime of the project, a Patient Advisory Group was formed which consisted of 10 volunteers (8 men and 2 women) who were recruited through the Patient Liaison Officer at Bath and North East Somerset Primary Care Trust. All 10 patients had either diabetes or chronic lung disease. Recruited patients were active in local patient groups and were used to, and could talk quite eloquently about, what they thought about recent developments in health care. As such, this group may not be representative of patients in general.

The main purpose of the Patient Advisory Group was to advise on the conduct, process and outcome of the research. This included giving advice on research materials such as interview schedules, offering their views on preliminary findings and key areas for further investigation. The Group met 6 times throughout the course of the 12-month research, beginning with a first meeting before the project began.

Meetings generally lasted for two hours and used a range of small group and interactive techniques to explore the patients' perspective. Notes were taken at all the meetings and one meeting (meeting 4) was tape-recorded. The topics discussed and general structure of the 6 meetings can be summarised as follows:

- Meeting 1: General discussion of what is supplementary prescribing. Mock role play of an interviewer interviewing a pharmacist prescriber. What questions would they like to ask?
- Meeting 2: Follow-up discussion of what is supplementary prescribing. Further discussion of what to ask pharmacists in the interviews – what issues are important to patients?
- Meeting 3: Sent group members anonymised versions of two pharmacist interviews. General discussion around key points of interest in the interviews and what should be pursued further.
- Meeting 4: Focus group discussion using a prompted scenario of a patient visiting a pharmacist prescriber. Key issues included how patients should be approached when seeing a pharmacist, issues surrounding patient confidentiality, responsibilities between pharmacists and doctors, and what happens when something goes wrong.
- Meeting 5: Sent group members anonymised versions of 3 patient interviews from the case studies. Discussed issues around communication between prescribers, particularly at the primary – secondary care interface.
- Meeting 6: Sent group members the full preliminary report in advance of the meeting. Discussed the report and how to disseminate the findings.

Considerable time needed to be spent in the first few meetings describing what was supplementary prescribing as no patients had experience of it. Initially, the group was quite sceptical about the benefits of, and rationale for introducing supplementary prescribing by pharmacists. Concerns included:

- The potential for medication errors by pharmacists
- Pharmacist access to the patient's medical record
- Prescribing environment and patient privacy in the consultation
- Type of patient who would see a pharmacist prescriber
- Pharmacists perceived as more of a retail professional rather than a medical person
- Lack of continuity of care and pharmacist turnover
- Consultation length with a pharmacist – would it be longer?
- Lack of confidence in pharmacists' ability to prescribe
- A mandatory route for all patients of the future?

These interesting issues were used to inform the research by providing the researchers with added areas to explore during both the pharmacist interviews and case studies. The process of patient consultation was cyclical in its nature and the researchers returned to the group on regular occasions throughout the project giving feedback to the members and to seek their opinion so as to inform the research process. For further details of the outcomes of the patient group meeting see Appendix 2.

5. Phase 1: Pharmacist Interviews

5.1 Method

Ethics approval was sought and obtained for Phase1. It was then necessary to gain research and development approval from each hospital trust or primary care trust that employed a prescribing pharmacist, prior to approaching the pharmacists to ask them to take part. NHS Research and Development research governance states that no member of NHS staff may be invited to take part in research without research and development approval from their employing authority. We therefore began by applying to the hospital trusts and Primary Care Trusts (PCTs) of the supplementary prescribers (SPs) on the Royal Pharmaceutical Society of Great Britain (RPSGB) register. There was no uniformity to the requirements across NHS organisations, with each one having its own procedure and application process. Application forms varied in length from 1 to 22 pages and in all, the research team applied to 90 NHS organisations across the UK. Once research and development approval had been obtained some organisations required the researchers to have honorary contracts and to obtain these some human resources departments asked for Criminal Records Bureau (CRB) checks, references and occupational health clearance. Eventually, research and development approval and honorary contracts (if required) were obtained for 89 organisations. The timescale for obtaining these ranged from 1 to 5 months. It should be noted that the procedures for Research & Development management approval have been improved subsequent to the difficulties experienced in our research.

The sampling frame included all pharmacists who had recently been awarded the 'Practice Certificate in Supplementary Prescribing' and who are registered with the RPSGB. At the time of recruitment (November 2004), there were no accredited supplementary prescribing courses in Wales so the sampling frame included only those pharmacist prescribers in England and Scotland. Potential respondents were sent a letter from the University of Bath enclosing a project information sheet giving them details of the research study. Pharmacists willing to participate were asked to complete a reply slip which was returned directly to the project team. Supplementary prescribers were selected for their diversity with respect to prescribing setting (PCT, community pharmacy or secondary care), breadth of clinical areas in which prescribing occurred (single/limited range of clinical areas or generalist prescribing such as medicines management, admission or discharge prescribing) and pharmacist background (university affiliation where undertook SP training, age and gender). It was anticipated that 20-30 pharmacists would be interviewed.

Interviews were used to investigate the following issues:

- The pharmacist's perceptions of the development of their relationship with the designated medical practitioner (DMP), or Independent Prescriber (IP), other members of the team and of how they feel they are perceived by patients.
- How the pharmacist perceives their own role and how it has changed over time (job satisfaction, views on traditional pharmacist duties and attitudes to clinical responsibility and accountability).
- The role that their training has played in their development as a supplementary prescriber particularly in relation to the learning in practice element of the SP course.
- Environmental factors that enhance or detract from their role as an SP (use of an electronic medical record, separate consulting areas, length of consultation, detail or brevity of CMP, systems of work within the setting)

Interviewed pharmacists were also asked if they would be willing to serve as a case study for the subsequent phase of the study.

5.2 Data Collection

In all only 90 organisations were applied to and although 89 approvals were received in all, only 76 approvals were received within the appropriate timescale. As a result only 96 recruitment letters were sent out to pharmacists.

5.3 Results

5.3.1 Participants

Although initial forecast was higher, at the commencement of this research (Nov 2004) only 237 were registered as supplementary prescribers. This number had increased to 430 three months into the research and by September 2005 this was 635 pharmacists.

Thirty eight pharmacists replied to the recruitment letter and agreed to take part in the research. Eight of these were not yet prescribing. It was decided to interview some supplementary prescribers who had not yet had the opportunity to prescribe as the reasons why they were not prescribing may highlight some important issues regarding SP implementation.

There was considerable variation within the primary care setting, with some pharmacists working full time within GP practices and some working as PCT advisors but carrying out clinics within GPs practices on a part time basis.

The number of participants recruited for phase 1 interviews was 23 and represented approximately 10% of the total number of pharmacists registered as supplementary prescribers at the beginning of this research. Details of the participants are given in Table 1.

Table 1: Participants in Phase 1

	Gender	Location	Prescribing Setting	Prescribing Area(s)	No of years working as a Pharmacist
1	F	Southwest	GP practice Full time	Multiple	15 years
2	F	Scotland	Hospital	Not prescribing	
3	F	London	Hospital	Multiple	18 years
4	M	Midlands	Community pharmacist working in GP practice part time	Not prescribing	26 years
5	F	Southwest	PCT pharmacy advisor/GP practice part time	Single clinical area or speciality	13 years
6	M	Northwest	Hospital	Single clinical area or speciality	16 years
7	F	Scotland	Health Board* pharmacy advisor	Not prescribing	17 years
8	F	Midlands	2 GP practices Full time	Single clinical area or speciality	20 years
9	M	Northeast	Hospital	Multiple clinical areas	20 years
10	F	Southwest	Hospital	Single clinical area or speciality	30 years
11	M	Northeast	Independent Community/GP practice part time	Multiple	15 years
12	F	Midlands	PCT pharmacy advisor/GP practice part time	Multiple	09 years
13	F	Scotland	Health Board* pharmacy advisor/GP practice part time	Single clinical area or speciality	19 years
14	F	Southwest	Hospital	Not prescribing	25 years
15	M	South	Community	Not prescribing	24 years
16	M	Midlands	PCT pharmacy advisor/GP practice part time	Multiple	17 years
17	M	Midlands	PCT pharmacy advisor/GP practice part time	Multiple	29 years
18	F	Southwest	Hospice	Single clinical area or speciality	25 years
19	F	Northeast	Hospital	Not prescribing	25 years
20	F	East Anglia	Hospital	Single clinical area or speciality	15 years
21	F	East Anglia	Hospital	Single clinical area or speciality	21 years
22	M	London	Independent Community/GP practice part time	Multiple	20 years
23	M	Southwest	Independent GP practice part time	Not prescribing	25 years

* The Scottish equivalent of an English PCT. See note under 5.4.

Immediately prior to interview the researchers ensured that the participants were clear about the purposes of the research and were reassured that their anonymity would be maintained. They were then asked to sign a consent form, agreeing to take part in the study and to the audio tape recording of the interviews.

5.3.2 Analysis of Phase 1 Data

All interviews were audio tape recorded and the tapes were then professionally transcribed. The researchers then checked the tapes by listening to each one whilst simultaneously reading the transcriptions. At that time, minor alterations were made such as adding or correcting words that the transcriber had not heard clearly and correcting any typing errors. After completing 23 interviews the researchers felt that the relevant themes had been saturated within the context of the study's objectives. The volume and richness of data collected from the participants was deemed to be enough for the purposes of the analysis.

Modified Grounded Theory provides researchers with clear guidelines which allow for the identification and progressive integration of themes. This method of integration across cases was particularly useful in the current research as both within-case and across-case analysis was used. In this way the analysis of each participant's unique view of the issues covered in the interview could be compared with the views of other participants to ascertain similarities and differences in perception of the areas under analysis.

Analysis began with an examination of individual transcripts using a computer software package to help sort the interview data into themes. One researcher used QSR NUD*IST VIVO (NVIVO) and the other Atlas as this was their preferred software. During the analysis themes were identified which were gradually refined and renamed, as patterns in the words and phrases began to emerge which were common to participants discourses.

5.4 Findings of Phase 1

The findings of phase 1 reported below describe the participants' experiences of supplementary prescribing and extracts from their narratives are shown in italics in the text. Several respondents were from Scotland where the organisations which oversee NHS community-based health services are called Health Boards. These are approximately equivalent to English PCTs. For simplicity, PCTs are used throughout this report to refer to both PCTs and Health Boards.

5.4.1 Pharmacists' experiences prior to entering SP training

Previous experience

Pharmacists' experiences prior to commencing the supplementary prescribing course varied quite widely, but this also reflected the fact that they were working in different areas of pharmacy practice. The three main areas were primary care, secondary care and in community pharmacies.

Most however, had considerable experience of working in pharmacy practice which seemed to reflect the fact that supplementary prescribing, in its early stages at least, has generally attracted those who have worked as pharmacists for several years and were looking to develop and expand their role further. The pharmacists who had done the training saw the new role as a 'challenge' or as one pharmacist stated '*a way forward for pharmacists. I'm very positive about it*'. These pharmacists tended to see themselves as innovators, willing to take up the latest developments and challenges in

the profession. This may have been because the pharmacists we spoke to were in the first or second wave of supplementary prescribing training, and therefore 'early adopters'. It is recognised that this potentially atypical group of respondents may not be representative of future supplementary prescribers as it becomes more widespread.

Pharmacists also saw supplementary prescribing as a way to increase their professional status and to have greater responsibility.

... you do have more autonomy..... its quite nice being able to prescribe in your own right rather than always going to a doctor and saying I think you should do such and such, could you change the prescription. I think it does give you a bit more status with doctors as well if they see you have done a course that enables you to take on more responsibility. (Participant 20)

Pharmacists also expressed a desire to have a greater responsibility for those areas of the doctor's role about which they feel they have greater knowledge – being able to prescribe correctly for the condition. Pharmacists had no desire to take on the diagnosis of conditions but felt they were better trained and equipped to prescribe.

Funding of courses

Pharmacists wanted to do the supplementary prescribing course in order to further and develop their careers. The majority had managed to get the support of their employers, or potential employers to undertake training. This is unsurprising as we only interviewed those who managed to get funding. Those who were unable to get funding and as a result were unable to become a SP were not interviewed. Training support appeared to be easier in hospitals where it was viewed as part of their professional development, and hospitals had a budget to fund relevant training for their staff.

We have, within the department we have a huge amount of training going on and it's very much within our ethos to train. We have got about ten people to do the training courses out of a staff of thirty at the moment. Within the trust we have always done quite well in terms of training and we know we have got to do the CPD. Regionally there's a good support network for CPD anyway... (Participant 10)

In primary care funding often came through PCTs, or in a few cases the GP practices themselves. In community pharmacies it was more common for pharmacists to fund themselves, as they operated as private businesses. However, some had managed to get supportive PCTs to fund them.

Finding a DMP & building a relationship

There did not seem to have been any real problems in finding a suitable DMP, and most reported a good relationship with the DMP as this pharmacist working for a GP said:

my mentor who works at the practice is also the prescribing lead and I have a very good relationship with him, he's very interested in developing healthcare professionals in their skills. (Participant 12)

The building of relationships appeared to be key to finding a DMP and the primary characteristic of this relationship was its tenure as this next extract from a hospital pharmacist working with an orthopaedic surgeon suggests:

I am pretty confident that she'll be quite happy for me to become involved but the thing is she's got confidence in me now she knows how I work because we've been working together for over 12 months so I'm reasonably confident that there is not going to be a problem with it. (Participant 8)

Thus, the longer the relationship with the doctor the more likely it was that they would agree to become a designated medical practitioner. This key issue of trust in the pharmacist – doctor relationship will be explored further in the phase 2 case studies.

It should be noted here, that the scope of this research only included pharmacists who had completed the supplementary prescribing course. We cannot say whether pharmacists attempting to undertake training have not done so because of difficulties finding a supportive DMP.

5.4.2 The Pharmacists' Experiences of Training

Support for Training

Pharmacists did not seem to have encountered any real problems in finding a suitable course, and in getting a place on that course. Most of the pharmacists interviewed were in the first or second cohort of the supplementary prescribing course, so demand for places was not particularly high.

Support from the DMP seemed to be particularly important as it was from them that the majority of participants learned and developed their skills in dealing with patients. One participant working in a GP practice said that his DMP had increased the length of some of his patient appointments so that the pharmacist had the opportunity to observe his consultations. This participant had also had the support from other GPs in the practice, *I also sat in with other doctors, as well, apart from my DMP so that gave me a variety of different clinicians.* (Participant 16). This pharmacist had worked in general practice for several years and during this time had built up relationships with secondary care consultants. This, he said, had been particularly useful as he had been given the opportunity to 'sit in' on some of these consultations, *'That was really good because you're seeing a totally different perspective'*. (Participant 16) He said that this gave him a better understanding of the patient's experience and enabled him, later, to advise his patients on what would happen if they were referred to a secondary care consultant.

Pharmacists' Views on the Training Courses

Pharmacists on the whole reported that they found their courses useful, although the aspects they found most valuable varied according to their background and place of work. In terms of workload, the majority of pharmacists reported that it was both intensive and demanding:

Getting the coursework done is a bit of a headache, I found that quite hard in the fact that the volume of work needed was quite vast and probably too much repetition in certain parts. (Participant 5)

Others made the point that they were trying to fit in the training alongside their normal work role, and also sometimes other family responsibilities as well.

With regard to content, those in secondary care, and to an extent community pharmacy, often felt they had good consultation skills as they dealt with patients as part of the role anyway (although some reported that it made them re-examine how they carried out those consultations). Most found it both interesting and useful to engage with pharmacists from settings other than their own and said they learned much from the experiences of others.

For other pharmacists who had little experience of undertaking patient consultations, however, the learning of consultation skills was a very valuable part of the course and gave them a useful insight into dealing with patients.

The big unit that had a lot of impact I think on the whole group was the communication and counselling skills and the work we did with [person A] in terms of how you approach patients, how you speak to patients, how to think about what they are doing and the consultation skills that we learnt with the GP trainers, because again that was learning new skills and new approaches. (Participant 10)

It seemed that perhaps a different approach to training might be required in dealing with pharmacists working in each different area as their skills and knowledge requirements varied. One of the more experienced pharmacists referred to the course as 'comprehensive' but to a certain extent '*a bit of jumping through hoops exercise that we had to satisfy certain criteria from the Society to be registered as supplementary prescribers*'. Others spoke of the need for more clinical skills training, but it was clear that for those already running clinics this would not be considered useful. In addition, some of the courses were training both pharmacists and nurses in supplementary prescribing, although their skills and training needs were perceived to be very different. The nurses already had good clinical examination skills, but needed more knowledge of prescribing and pharmaceuticals. The pharmacists felt they often had a greater need for clinical examination knowledge and consultation skills.

In contrast, a participant from community pharmacy said that he felt that some of the clinical elements of his course were too far advanced and would not be used by a pharmacist in a supplementary prescribing setting. He described how one session of the course was from a physician showing the students how to do a 'full cardiovascular work-up' but no one had taught them how to take a patient's blood pressure, which would be more relevant. A number of participants felt that there was a significant emphasis on diagnosing, with one saying, '*we had a whole morning in diagnosis – why do diagnosis – we're not diagnosing, I really thought that was a waste of time*'. (Participant 11). Another participant found difficulty with conceptual issues such as the risks of drug treatment in certain conditions.

Other participants too, said they found the in-depth clinical examination skills less relevant or useful as they did not use it often enough, and therefore forgot the skills before they were able to make use of them. There seemed, however, to be great variation in the content and presentation of the courses attended by the participants with some welcoming more clinical and diagnostic skills training.

Most, however, felt it was the practice-based element of their training which was most useful:

I think you learn most, not from the academic component but from working with your DMP, so to engage with an experienced consultant in terms of what would you do here, how would you weigh up risks versus benefits. (Participant 6)

5.4.3 Extrinsic factors: getting practical structures in place

Clearly, undertaking training is just the first step in becoming a prescribing pharmacist. Of the 23 pharmacists interviewed for Phase 1, seven were not yet prescribing for a variety of reasons (three hospital, one PCT and three community). The issues discussed in this section are those which emerged from the participants' narratives which illustrate the important practical structures which need to be in place before they can begin their prescribing practice. Particularly for those who had little or no experience of undertaking patient consultations and making prescribing decisions, it was evident that there was still a great deal of learning to do once training was completed and the reality of their situation became apparent.

Support from Employers

As discussed in section 5.4.1, support from a number of sources was felt by participants to be essential before pharmacists could begin their roles as supplementary prescribers. In each of the three settings, the pharmacists who had been successful in setting up their prescribing practices were those who had sought and received support for their initial training. They then had been able to convince their employers and colleagues of the values and benefits to patient care that could be derived from additional prescribers within their setting.

An important element of gaining support for prescribing appeared to be the level of understanding at PCT or hospital Trust level. In some cases pharmacists felt that the level of understanding was poor and that there was a lack of clear guidance, because of this, from employing authorities. One pharmacist, who had been prescribing for some time, felt that supplementary prescribing practice in his PCT had not progressed because of a lack of understanding:

I think we've still got a number of issues within the PCT, I mean I can't fault the people that I've been working with and my bosses in particular, but I think the PCT hasn't come to grips with nurse and to a greater extent pharmacists prescribing – it doesn't know what to do. (Participant 17)

Another participant worked as a pharmacy adviser to a number of GP practices but only prescribed in one. In this case it was the receptiveness of the practice which was important. Although the practice in which she prescribed had continued to provide significant support when she had tried to extend her role in other practices she had met with some resistance:

There are certain practices that I would never suggest either prescribing or recommending [medication] because the GPs would just look at you as if you've just crawled out from under a stone. (Participant 13)

In secondary care, a participant from a large teaching hospital talked of the importance of gaining Trust approval for pharmacists to begin prescribing in that setting. She and her colleagues had taken the initiative and drawn up a proposal which they had eventually presented to the Trust board:

.... The Trust has to support the role too so we took the proposal to the board and its been ratified by the board but I think that's fundamental because if they don't support non-medical prescribing [it can't be done] ...and it was only when the pharmacists started being trained that it was actually addressed by the board. (Participant 21)

Most hospital pharmacists interviewed said that their role had not changed since undertaking supplementary prescribing training in that most hospital pharmacists have worked with doctors advising on prescribing and adjusting doses. Thus they felt well supported by their employers. In the case of one hospital pharmacist, she had taken over the role of the consultant dealing with patients' drug therapy:

But the role was probably already there. But when we initially took on the role we had a lot of support from the consultant and obviously you know the director of pharmacy has been supportive all the way through because we couldn't have done it without him, and the consultant actually asked us to take over the service. (Participant 10)

This role included checking patients' clotting time (INR) and contacting either the patient or their GP by telephone to advise on adjustment of dose. The issue of support took on another dimension in this case, where the pharmacist's role extended into primary care:

I think the most difficult thing that we are still trying to get our heads round is the fact that our patients are mostly in primary care but we are in secondary care. And it's making sure that the shared care guidelines encompass the scope of the service and that the GPs pass information to us when patients medication is changed or things change, and we still haven't really got round the fact that we haven't got direct access to their notes. We don't necessarily know what is going on... it would be much easier if we had our own clinic, with our own patients, who weren't prescribed anything else by anybody else ... it is a bit more of a compromise coming from secondary care. (Participant 10)

This illustrates the diversity of the role of supplementary prescribers and highlights areas where a lack of understanding and the structures to support SP may lead to problems in service delivery.

Support from Colleagues

Across the both primary and secondary care setting pharmacists felt that they had great support from their colleagues and this was the most important source of advice and help. Many have developed links with their colleagues from the SP courses and used these to share information, for example templates for clinical management plans for specific prescribing areas. This, they felt was support that they could not obtain from any other source as the experiences of colleagues helped them to continue to improve their role. A primary care pharmacist was in the process of developing a support network and said:

I have got links from the course. Actually I have taken on the non-medical prescribing lead for the faculty on prescribing... so we are trying to get a support network going. (Participant 1)

One community pharmacist who was just beginning to prescribe for a local GP practice talked of the professional isolation of community pharmacists. He had previously worked in secondary care and gave an interesting comparison of the two settings and the importance of support from colleagues:

As a community pharmacist you are very isolated. In a hospital pharmacy I could shout and I'd have 15 pharmacists there. There was never any shortage of adviceHere you are just on your own.

Fortunately, as I say, I have got X who has got the same level of experience in community [pharmacy as I].. so I can phone her up and we can chew things over. (Participant 23)

Another respondent supports the notion that support from colleagues is readily available within the hospital setting:

...I feel my working environment is very supportive and as an individual any of us would be well supported if we said I am not happy with umm respiratory medicine, I feel I need to do a bit extra with that. (Participant 19)

Support from the RPSGB

The general feeling from pharmacists was that they expected to receive the majority of their support from employers and colleagues and were non-committal about support from the RPSGB. Only one pharmacist who was working in a community setting, prescribing for a GP practice made direct reference to support from the Society when talking about trying to obtain guidance on prescribing practice:

I asked someone in the Pharmaceutical Society what the position with this was and got a very vague and non committal answer, they didn't say no. There were two questions, one could I sign a GP's FP10 which they didn't say I couldn't and I can find nothing in the guidance that prohibits it. The other question was about a clinical management plan for things like changing syrups to sugar free syrups, capsules to tablets or formulation changes to which they said it was very important to get the clinical management plan done... it didn't really answer the question but they didn't say no to either of those questions. (Participant 11)

Here, this participant was referring to what he felt was a general lack of support from the Society and that once he had completed his training in supplementary prescribing he felt that pharmacists had been left very much to their own devices. From the above narratives it is apparent that pharmacists feel that the majority of their support, once they have begun prescribing, is derived from their employers and colleagues, with the latter providing the most useful support and guidance through networking and sharing information. The fact that little mention was made of the RPSGB in terms of support may imply that it is either not expected or not required.

Funding Issues

The participants from the community pharmacy setting appeared to have the greatest problems with funding and none of the participants interviewed was prescribing within the community pharmacy setting per sé. If they were prescribing, they were doing so within a GP practice. For example, one pharmacist worked part time for a large pharmacy chain, paid by that company, and worked one session a week in a GP practice undertaking medicines reviews (not prescribing) paid for by the PCT. He had not clarified with the PCT whether they would pay him more money if he did prescribe. He began by saying:

The difficulty there that I do see and which has been something that possibly has slightly held back the funding issue, is that I am paid as a practice pharmacist by the PCT. It's not always clear where the PCT view supplementary prescribing within the practice pharmacist role. (Participant 4)

He clearly had two separate roles and discussed the practicalities of a pharmacist being paid to work full-time by a community pharmacy and trying to develop his role as a supplementary prescriber. He said that as the mechanisms were not yet in place for him to prescribe from his community setting, he would have to do so within a GP practice.

As a supplementary prescriber...the community pharmacy is a business which needs to pay its pharmacists. Giving my time as a community pharmacist free to the PCT is probably not a good business proposition. (Participant 4)

The problems of funding were not, however, confined to the community setting. A hospital pharmacist who had trained in the first cohort in her region was still not prescribing one year on and said that the reason for this was largely to do with a lack of funding:

... they [the hospital trust] are very conscious of trying to set up systems, but not having the resources to do it either in terms of manpower or money ... but there is not going to be any extra funding. You could argue that pharmacists could be useful as supplementary prescribers in out-patient clinics but that has resource implications... so you would need to fund someone to do that and the money obviously is just not going to come. (Participant 19)

Participants generally believed that it was important to develop a business plan to justify their role as supplementary prescribers, but even when they had done this funding may not be available as doctors may be reluctant to change existing practices. A PCT pharmacist discussed this issue:

The other thing is that you're not going to be able to set up the clinic if there is no need for it so you need to go looking to see where you can actually make a difference. There is no point, like me, naively thinking I could run a diabetes clinic and then finding out that the doctors didn't want to put the funding forward because they were quite happy with the way it was working and they wanted to fund a nurse. (Participant 8)

In general it would appear that those pharmacists who have successfully made the transition into prescribing have done so by careful analysis of service requirements within their setting, liaising with the relevant individuals and have developed a business plan accordingly, in order to justify the extra funding involved.

Electronic Medical Records: getting to grips with technology

Essential to safe and effective patient care is access to patients' medical notes. In the hospital setting computer systems provide basic clinical information but still rely heavily upon written notes. However, in terms of access, hospital pharmacists appeared to have few problems with access to computerised records. Also, the hospital pharmacists had been working with their systems for longer and were used to them. Primary care pharmacists had encountered more problems as they were less likely to have used GP computer systems for any length of time prior to their new SP role. However, primary care IT systems are more developed and IT plays a much larger role in delivering care (e.g. in audit and therapeutic reviews). In the community setting the lack of access to patient notes could be an important block to pharmacists prescribing.

Participants within the primary care setting who did have access to electronic medical records said that learning how to use these effectively and ensuring that other health care professionals involved in patient care made regular and accurate entries into the system, caused them some difficulties. A participant from such a setting pointed out the variations in the use of electronic records:

Most practices I work in have electronic records, but one or two of the doctors don't always use them. So what that means is that you have to make manual records as well as your electronic records... so it's a bit of extra work. (Participant 16)

This duplication in recording may lead to serious errors or omissions which could compromise patient care. However, even where GP practices have full computerised medical records which are shared by all involved in patient care, the use of these can be somewhat challenging. Another participant was asked whether she referred to the electronic records during patient consultations. She described how when she first began to see patients she found it difficult to keep looking at the computer screen and concentrate on the patient at the same time. Although she had resolved this by making retrospective records one of her worries now was that she would fail to note something important about the patient's history, because of the demands of the GMS contract:

I didn't like to break any eye contact and I wouldn't note the records until the end of the consultation. But what's happened with the GMS contract is that everything is in templates and some of the templates are really long, so you have to go through a template and fill in the answers as it were, and unless you have the patient there sometimes you forget that there is a bit about family history – of you know, stroke, heart disease or whatever and they have gone and you are half way through and you think 'Oh, damn'. (Participant 1)

Although few community pharmacists have access to electronic medical records, one participant who was an independent community pharmacist attached to a GP practice, had full access to patient notes and found the system worked very well. Another, who was in the process of setting up his prescribing practice, talked of his experiences. He owned his own retail pharmacy and had successfully installed a computerised system in his shop, which linked to the GP practice 200 yards away. The pharmacist himself had an IT qualification and so was keen to bring in computerised links with the surgery. The Chief Executive of the PCT was very interested, had been involved in the process and between them they had decided to go ahead with the link as an experiment which would be funded by the PCT:

it took an awful lot of arguing because of security and whatever so, and it slowly developed and we have got this system whereby patients sign in, so it is a positive thing, it took a lot of time to do and we got the vast majority of the patients we are interested in, most of the ones that haven't signed are the ones who are just on the list [and don't see their GP very often]. (Participant 23)

The pharmacist was asked how he dealt with patient confidentiality and replied that all the patients registered with the practice had received a letter from the GPs asking them to give him access to their medical records. Three levels of access were available:

as I say there are three levels, one they actively say no I don't want you to see the records.... They sign for that in which case we can't even see

their prescription for stuff, level 2 is they haven't bothered to say anything in which case we can see the prescription information which is no more than we can see anyway because of the paper forms coming up and there is a level 3 if you like which is they sign to open the record, in which case we can see absolutely everything.(Participant 23)

It was clear during the course of this interview that without this participant's knowledge and understanding of information technology and the PCT Chief Executive's support, the setting up of the computerised links would have been very difficult.

Of great concern to the majority of participants was the fact that they were unable to electronically generate prescriptions. This meant that in most cases, in order to prescribe, pharmacists would need to write out the patients' prescriptions by hand. This was something they were reluctant to do because of the potential for errors. The following quote is a good example of the lengths some pharmacists are having to go to, to solve this problem:

The IT hasn't followed practice, so that the Government has sort of pushed through supplementary prescribing by pharmacists in the Department of Health, but in terms of producing a prescription that you can put through the computer that will print out – we haven't got one. So what you're doing is, you put it on the computer and then you transcribe across onto a piece of paper by hand and then you print out what's called the BPrint so that its on the computer – and the patient has got a copy of it but you've actually written out by hand what they're having so you could technically make a mistake in transcribing, so that's risky. If I was prescribing a list of drugs for somebody who had diabetes and I got a dose slightly wrong, the computer wouldn't have a record of it so that's an issue – that IT is lagging behind. (Participant 8)

The Clinical Management Plan (CMP) will be discussed in the next section but one PCT/GP based pharmacist highlighted how the use of technology could expedite the generation of CMPs but at the moment it was more of a hindrance:

I have to print the CMPs - the clinical management plans - off as a word based document, I have to print them off, get them signed or agreed and then I have to have them scanned in... I had a meeting with one of the IT people to look at the commissioning some training to train me and the practice... because I believe you can put the CMP in Vision I mean that's fine it's not ideal but it's better than nothing. (Participant 12)

The Clinical Management Plan (CMP)

Under supplementary prescribing legislation the CMP is a legal requirement and a document must be produced and agreed by the pharmacist, the independent prescriber and the patient before the pharmacist can prescribe any drug. Although the legislation is quite clear about this the CMP was an area which caused the greatest difficulty for some pharmacists. For ease of reading, this section is divided into two – primary and secondary care – as the problems experienced by pharmacists in the two settings are quite different.

The Clinical Management Plan (CMP) in Primary Care

Throughout the interviews with pharmacists, the researchers collected samples of CMPs from various settings. Some of these have been anonymised and are given in

Appendix 3. As can be seen there is significant variation in the way the documents have been written.

The majority of pharmacists found the writing of CMPs for each patient a lengthy and time consuming task. One pharmacist was unsure whether she would refer to them in the course of prescribing for her patients:

... even though in theory it is good, in practice it is quite hard to get those plans individualised for each patient and discuss it with the independent prescriber. I think that slows the process down and puts people off a bit ... To be honest its ok at first but I can't see me once I've shown the patient it, I can't see me referring back to it very often.
(Participant 5)

In contrast, another participant was so worried she might not have written her CMPs correctly that she had devised a long list of templates for a variety of conditions.

Whilst the guidelines for supplementary prescribing suggest that patients with more than two disease states are unsuitable for this role, in practice pharmacists felt that if supplementary prescribing is to be of benefit to patients, then they need to prescribe for all the patient's medical conditions. For example, participant 1 talked about a patient who suffered from diabetes and heart disease which were covered by her CMP but, in the consultation, the patient said she also had arthritis where there was no CMP. The pharmacist was unsure whether to refer the patient back to the GP (in which case she might have to make a return trip to the surgery) or to prescribe for the arthritis and write up the CMP and agree it with the GP at a later time. The inconvenience caused to patients by having to make a further appointment with their GP appeared contrary to current health policy to design services around patient need.

This was echoed by another participant (1) who said '*I don't think CMPs are working, well not for me anyway*'. She compared the way pharmacists use CMPs with nurse prescribing saying that she felt they worked better for nurses because their areas of practice were more specialised:

If you are working in general practice, you do have a level of competence on lots of different diseases and you can't end up writing hundreds of CMPs for every variety of patient who might come in with a mix of some slightly different things ... (Participant 1)

Some participants had overcome this problem by keeping templates for a variety of disease states which enable them to prescribe for anything associated with that disease. An example of this is given in the CMP Appendix 3. Participant 16, who had been prescribing for eight months described how he used the CMP:

I use a CMP which is fairly standard so my patients with [high] blood pressure or the smoking cessation patients that I look after, I have a sort of generic CMP which I agree with doctors which I've just adapted for individual patients.

This pharmacist had taken a considerable amount of time to think through how the CMP could be best designed to fit within the guidelines but also suit individual patients. He felt that to a great extent it was up to the independent prescriber to decide whether he/she was willing to allow the pharmacist to prescribe, say, anything from the relevant section of the British National Formulary.

An independent pharmacist prescribing for a GP practice talked about the somewhat relaxed attitude of his independent prescriber towards the CMP:

It is very vague and broad as they can possibly make it. For hypertension it's any anti-hypertensive basically, because I think it's silly to put extra work into limiting yourself because you come up against a problem – you have to jump through another hoop. Basically the agreement with the doctors was to have a very broad plan, they were not in the least interested in what the plan said. (Participant 11)

The issue of responsibility raised by the above comment will be discussed in the next section but in general, supplementary prescribing pharmacists working in the primary care sector understood the requirement by law to have correctly written CMPs for individual patients.

The Clinical Management Plan (CMP) in Secondary Care

The views of hospital pharmacists on clinical management plans were mixed and this was largely due to the overall attitude towards prescribing by individual pharmacists. In primary care pharmacists usually worked within a clinic setting with one independent prescriber taking responsibility for agreeing the CMPs for individual patients. Within the hospital, one of the main difficulties reported by pharmacists was that, although they may specialise in a particular disease state, they are prescribing for patients who are under the care of different consultants. Thus, identifying the independent prescriber and agreeing the CMP with both them and the patient becomes an onerous task. An example of this comes from participant 10. The DMP who supported her during her supplementary prescribing training was not her sole independent prescriber, as the prescribing of this particular type of medication was done by each individual consultant with the writing up of in-patient doses done by a junior doctor on the team. The pharmacist would then adjust the doses according to blood test results without referring to the doctor, both whilst the patients were in hospital and once they had been discharged. No CMPs were in place in this setting with the pharmacist using the patients' notes and drug charts to record any recommendations about drug regime whilst the patient was in hospital and, in primary care, using the medication record card which was mailed in from the community. She was, however, aware that the CMP was a legal requirement and talked positively of the benefits of having them:

I think they're good, in that they make you take a proper medical history of your patients. They make you think about other medication they might be on and they make you think about each one as an individual rather than just thinking oh another patient with AF [atrial fibrillation] and just carrying on. The downside of it is that they are very time consuming to fill in and produce. We haven't got access to the medical records so that, that is a problem and how do you keep them up to date, when you don't know what's happening because you are not seeing the records. The template isn't in the patients notes at the GP practice so it doesn't automatically get updated when drugs are changed or whatever. (Participant 10)

This participant said that, for their hospital prescribing, everything that would be on a CMP was recorded but not on one document.

A similar view was reported by another hospital pharmacist who felt that CMPs were unnecessary in his situation as everything that would be on the CMP was recorded in the patients' notes and medication charts:

Your clinical management plan actually details what is compulsory information but for things like patient name that is in the case notes like diagnosis or treatment to be managed - that's in the case notes, working out a choice of things that is probably in the case notes, agreement with the clinician that can be readily scribbled in the case notes, therefore if you've got a set of case notes within the hospital setting, what additional information do you need to fulfil the legal requirements of your clinical management plan? So in terms of us saying well we don't really go down the line of clinical management plans, if I scribbled in somebody's notes and said oh these results have come back and suggest treatment with whatever discussed with the registrar and prescribe the same it would be for the legal brief people to argue about....people seem to think a clinical management plan for everything must be 1 side of A4 paper, it's like well where did that come from? It's just somebody has presented something in terms of here is a pro-forma you can use and everybody is taking it from that this is the pro-form you must use. (Participant 6)

The above narrative reflects the view of a number of hospital pharmacists that the CMP is not necessary and it is only there to make legal what has been custom and practice in hospitals for many years. However, other hospital pharmacists had successfully adapted the CMP and found that it worked well. One was prescribing for bowel management of elderly orthopaedic patients and had agreed a CMP for this with his independent prescriber. He was hoping to be able to prescribe analgesics in the future and had a CMP prepared in readiness for this:

I have a generic clinical management plan for Bowel Management. What I've done is I've actually listed the drugs down that I prescribe from so its things like senna, Movicol and some enemas..... I've done another generic one which I'm going to put by my mentor and basically what I've done in there is I've listed I've actually listed the drugs effectively and there is evidence of where they've come from as a formulary, drug and therapeutics formulary. So I've just got a list of paracetamol, codeine, dihydrocodeine, tramadol, morphine sulphate solution and that will be what I'll prescribe. (Participant 9)

This particular pharmacist did indicate that writing an appropriate CMP for this setting had not been straightforward but had persevered. Another pharmacist had not yet begun to prescribe and had some concerns about current practice within hospitals:

I am just not entirely sure about the legalities, whether you can say these combinations of documents, the notes, the medicine chart, trust protocols with different treatments. I am not entirely sure whether we can actually say in legal terms that that is a clinical management plan. It probably covers, altogether all the stuff, all the documents together, probably do encompass everything that would be written onto a clinical management plan, but I'd just be happy with, if someone could reassure me that legally it was all covered. I just need to be working legally. (Participant 19)

Clinical Governance

Issues about working within the legal framework arose on many occasions throughout the phase 1 interviews. In some cases, as above, the pharmacists were themselves unsure of whether what they were doing was legal. Some clinical governance issues surrounding the CMP will be further discussed in this section.

Prescribing Outside the Boundaries of the CMP

As discussed earlier a number of participants in primary care found it difficult to care for patients who presented them with health problems outside their existing CMPs but which the pharmacists believe themselves to be competent to prescribe for. In some cases pharmacists reported taking the decision to prescribe, rather than inconveniencing the patient, and agreeing this with their independent prescriber retrospectively. Participants were asked whether they had ever been asked by a patient to prescribe something that was not on their CMP and how they dealt with the situation. Whilst some said they would refer the patient back to the GP regardless, others said it would depend what the drug requested was. A few said they had prescribed outside their CMP with the full knowledge that it was illegal, as the extract below illustrates:

I actually did it, I wrote a very quick management plan for all these bits and pieces and just did it.. One of the GP's is happy for me to prescribe whatever I feel competent to, he said so and it was one of his patients who he'd referred to me. It was stuff he was on repeat prescription for anyway. The only dodgy one was finasteride and actually by doing it I picked up some haematuria anyway, so had I refused to do it, he would have been worse offI said how are your waterworks and he said oh well I had a bit of blood the other day, and I said oh right I think I am going to have to speak to your doctor about this, but I wrote him the prescription anyway because he had six repeats on and it was three of six so I typed something that I thought would make a clinical management plan... it was possible in that scenario. Another woman wanted paracetamol, which I just did because she was in her eighties... I thought the risk to myself was minimal. (Participant 11)

Here the pharmacist believed he was acting in the best interests of the patient, within his competence, and appeared to take the clinically appropriate course of action to refer the patient with haematuria back to the GP. He had a strong belief that his independent prescriber would support him.

It was felt by the researchers that issues such as this warranted further examination in the case study phase to discover whether participants were acting within the boundaries of supplementary prescribing legislation.

Lapsing Skills

The hospital pharmacist who had made the earlier comment about the legal issues of prescribing (see previous section on the Clinical Management Plan in secondary care, participant 9) had been in the first cohort in her region but had been qualified in SP for one year and was still not prescribing. This raised the question of whether she had retained the skills she had learned during her training:

I mean obviously it's still daunting because it's a big brand new responsibility and it will have been a year ago since I was using my skills. And I think the other thing that's quite important is the fact that even though we all have a speciality the way that it is envisaged that we go forward with supplementary prescribing in the Trust means that you won't necessarily just be prescribing within your speciality. Because supplementary prescribing allows you to prescribe in any clinical area as long as you are competent within that area, so if we are dealing with general medical patients coming through a hospital medical admissions unit, if we've all got to be at running speed and complete, which we should be but we've all got to be 100% confident,

sure of our own competencies in all areas of general medicine.
(Participant 19)

Although she expressed a lack of confidence, this pharmacist said that she was experienced enough to ask for and accept advice from colleagues if she felt her knowledge was not sufficient for the task. The issue of lapsing skills is equally important in the primary care setting. As one PCT pharmacist replied when asked if she might lose some prescribing skills through lack of practice, *'If I'm going to do it, I need to do it this year because I'm going to lose them'*. (Participant 7)

Responsibility and Accountability

Lines of responsibility and accountability seem to be fairly clear in the primary care setting, with the majority of these pharmacists being quite comfortable with this aspect of prescribing. One participant working in a GP practice expressed this feeling well:

I'm very aware that once I do start putting my signature on the piece of paper I'm accountable for it and it probably will make me feel cautious at first, well probably always. I feel as though as long as I feel competent to do that then I will, but I will always refer back if I'm not happy with it. So it will make me extremely cautious where I'll maybe check with the GP first – especially for a little while anyway. (Participant 5)

However, another participant with a dual role in the community and in a GP practice, felt unsure with respect to personal responsibility:

I think probably legallywithin the clinical management plan Its difficult, again we're in a bit of an unknown area, its difficult to say exactly where the boundary between supplementary prescriber and the independent prescriber for responsibility is. (Participant 4)

However, in the hospital setting some instances arose where the participant was unsure about who took ultimate responsibility for their prescribing practice and in some cases, to which they were accountable. An example of this was the pharmacist who was adjusting medication doses for a number of doctors both in hospital and primary care. These issues were investigated in greater depth during the phase 2 case studies.

Indemnity

There was a certain amount of confusion amongst many participants about who would cover them for indemnity purposes. This was particularly pertinent for an independent community pharmacist prescribing for a GP practice. He discussed what would happen if he made a mistake:

But I don't have an employer to be responsible to other than if I do something really daft its loosing me a contract and I'm not sure, you see we are monitored by the Pharmaceutical Society ... you know they are very black and white but on a few things, this sits way off, way off pitch for themThe person who usually inspects me pharmaceutical-wise wouldn't really know what was going on yet I suppose maybe they will catch up with us. (Participant 11)

Another participant employed by a PCT said that supplementary prescribing was so new and there had be no test cases in law, so no-one was quite sure of what level of indemnity was necessary:

.. the training that's given to supplementary prescribing is very new, it's a new job and if you want an example of that I still don't know how much my professional indemnity insurance is going to be because I don't think we've had the proper.. the risk of it has not been assessed properly by the underwriters. (Participant 17)

In the hospital setting participants said that all pharmacy practice was covered by their employing authority and it was not an issue that had so far concerned them.

Confidentiality

All participants said that they were bound by the same rules of confidentiality as other health care professionals in their setting. All were asked whether the patients referred to them knew that the pharmacist would have access to their medical history and most assumed that the patients would infer this because the pharmacist was treating them. In the light of the recent NHS Care Record Guarantee, the researchers felt that this would be an important area to examine during phase two. An example of the variety of comments regarding confidentiality is given below:

My understanding is that individual patient consent does not have to be obtained if the health care professional is working in the patient's best interest. That is how I see it. (Participant 17)

All participants agreed that access to patients' notes was essential to their practice as supplementary prescribers, as without this they did not feel confident about prescribing and without this, patient safety could be compromised.

5.4.4 Intrinsic factors affecting pharmacists' role

Relationships

It was clearly important that pharmacists working as supplementary prescribers should be able to establish good working relationships with other health professionals in whatever setting they worked. This was particularly important in primary care as the role was new and supplementary prescribers needed to have the support of practice staff in order to ensure patients were referred to them. In secondary care, where pharmacists already had a similar role within the team, they saw this as a natural extension of the existing role.

In the practice setting it was much easier for the pharmacist to work as a supplementary prescriber if they had already established connections within the practice, or had been working in the practice, for example as a practice pharmacist. It was felt for some supplementary prescribers it would be difficult initially to establish a relationship within a practice setting coming in from the outside. Certainly, the experience of Participant 1 suggested she was initially viewed as a threat by practice nurses who felt that she might try to take over their role:

The only difficulty I found was we've got a nurse practitioner here, and she is, she is just qualified, she is very keen and she was also a cardiology nurse in hospitals so she has got a huge knowledge base, there was a slight tension as to where the patient goes because obviously the doctor's are keen to use my training ... (Participant 1)

It was important therefore that supplementary prescribers had the necessary diplomatic skill to establish good working relationships with other health care professionals and to work within the team:

I think it is just having communication, very open communications and the fact that I am not precious about doing everything a supplementary prescriber is trained to do like blood pressure monitoring. You know we have got health care technicians who do it all the time for the doctors so why should I try and prove myself because I know I can do it? I do it when I see my patients for my patient review but when they have just come from a clinic setting with the nurse then all the information is there. So it is working with the people who are already there, and working efficiently, really. (Participant 1)

There was also evidence that, as the supplementary prescribing role became better established, there was greater acceptance of the benefit of the role by other health professionals. This was true of GPs who saw the benefit of pharmacists being able to prescribe and sought advice from them on medicines and correct dosages. This was also true of nurses who might themselves be trained as supplementary prescribers, and recognised that they could support pharmacists and pharmacists could also support them. A multi-professional approach could work quite well:

I've seen some of the fantastic models where a nurse and a pharmacist run a clinic together and the nurse does the physical exams and the pharmacist does the dose titrations. I'd love to do something like that and when I was training some of the best days I had were days when the nurses sat down with me and taught me how to take blood pressures properlyand the nurses were fantastic and another nurse who was considering supplementary prescribing but actually wasn't sure was asking me all sorts of questions about how will it work and I'm not really sure and she made me re-examine how it was going to work because of her doubts ... (Participant 8)

In the community pharmacy setting it was even more important to establish a good working relationship with a practice, as the setting was usually physically separate from the GP premises making informal face to face contact less likely to occur.

The relationship with the IP was a very important one, and it was considered important that the IP have a good understanding of the role of supplementary prescribers, and that there was trust and openness in this relationship. Supplementary prescribers spoke of the importance of having good support from their IP and someone to be able to discuss any problems that might arise.

A really good relationship with a designated medical practitioner because you have to be prepared to accept criticism and you do have to ask them for a lot of support and it's very difficult to accept criticism in a way that's going to be supported if you haven't got a very good relationship because you can feel very vulnerable and the whole idea is learning and developing and moving forward (Participant 18)

In hospital settings, the relationship with the IP often seemed slightly more of a transitory support role - particularly during the training period, but after that it might not be as important as the supplementary prescriber would be likely to be working within a team environment.

Job satisfaction

Pharmacists who were working as supplementary prescribers generally spoke of their satisfaction with the role as it was something they had trained to do, and enjoyed doing. One spoke of the opportunity to 'do something clinical rather than just dishing

out tablets.' For Participant 7 being able to prescribe was an ambition she had held since her initial qualification as a pharmacist:

When I first qualified in 1985 they took all of the new recruits to XXXX head office and they sat us down and they said 'write down three things that you would like to see in your lifetime as a pharmacist' and I put prescribing, even then, because to me the pharmacist is more than adequately qualified. (Participant 8)

There was an agreement amongst supplementary prescribers that this was how the role should develop in order to give them job satisfaction, and that a dispensing role would never be sufficiently challenging for the majority, nor would it make sufficient use of the skills they had gained during training.

Another aspect of job satisfaction for supplementary prescribers working in primary care and community pharmacy in particular, was the ongoing relationship with the patient and the opportunity to continually review their medication. There was also a sense that this ongoing relationship with the patient helped to increase compliance with medication, and meant that the pharmacist could begin to explore reasons for non-compliance.

I like the one to one with the patient..... When you're a supplementary prescriber and you see a patient you have an ongoing relationship with that patient so you don't have to do it all on the day because you know you're going to see them next week or in a month or whatever. So you just do a little bit at a time and you get a relationship with the patient. Get to know them, you get to know what you can say to them - 'are you taking your tablets?' You can also do what ever needs to be done on the day straight away without having to wait for the doctor to come and do the changes. You can actually do them yourself and you know it's been done and you know the patient has got straight away access to what they need to have. It's a huge difference and much more fulfilling. (Participant 8)

These respondents felt there was far greater scope for increased job satisfaction as a result of training in supplementary prescribing, because of the opportunity for greater control over their own work. These issues may not quite be the same in secondary care where the role had evolved into supplementary prescribing and pharmacists had already experienced a degree of autonomy.

Other pharmacists spoke of their satisfaction at being able to make a difference to patients' health by giving them information or support concerning their medication that was perhaps different or of a more detailed nature than given by other health care professionals. In addition, participants spoke of increased job satisfaction with being able to work within multidisciplinary team, and contribute to patient care through the shared knowledge and support of that team.

Conflict

The main reasons for conflict identified by supplementary prescribers seemed to stem from a lack of understanding of the nature of their role. Where there was a lack of knowledge about the boundaries and possible scope for carrying out supplementary prescribing it was possible that others might perceive it as a threat to their own role. This was seen particularly in primary care where some practice nurses saw overlap with their own areas of work, which gave them concerns about personal status and areas of responsibility. Participant 8 described how she felt it was very difficult to

remain in post where there was antagonism from a practice nurse who found her role threatening.

Where I did my training one of the reasons I didn't get the job as a diabetic pharmacist was because the nurse wasn't prepared to move aside and give me the room to do it. She was very threatened by me and the practice that I'm doing in dyspepsia - nobody else is doing dyspepsia. (Participant 8)

A prescribing role in the practice setting was facilitated by first ensuring that there was a need for their role and to have established relationships with the primary care team beforehand. For these reasons, it was more difficult for supplementary prescribers to establish their role if they were coming into post as newly appointed members of staff. It was accepted by supplementary prescribers that there might be overlap between themselves and practice nurses or nurse practitioners, particularly where the nurses themselves had been trained as prescribers:

I think there's an overlap between their skills and knowledge and our skills and knowledge, obviously they are much better at the clinical side of things..... but I worry about how much the nurses have got to take on board about drugs. I mean obviously as a pharmacist I worry about the clinical [examination] skills, but I worry for them about the drugs because I have the background and understanding to know that, if you've not checked out all the contra indications and the side effects and all the rest of it and you give something that is not appropriate for that individual the consequences are deeply serious for that individual. (Participant 19)

There was an agreement that where nurses and pharmacist could work together, then the roles can complement each other very well.

Conflict over roles did not seem to arise to the same degree in the secondary care setting, where pharmacists' roles had not altered as much. Nurses in hospitals had often taken prescribing courses themselves, and did not seem to perceive the pharmacist's role as a threat. The main concerns about supplementary prescribing in secondary care seemed to come from doctors where a lack of understanding led to concerns that pharmacists were trying to reinvent themselves as 'mini doctors'.

We did have some issues at the beginning with the docs, I think they did feel threatened, they did feel we're taking over the roles. We were trying to be mini-doctors and I think in their position I probably would have felt exactly the same and there was a very telling comment made to me by the consultant.. and the subtext of what he (the doctor) was saying was the clinical management plan gives a huge amount of freedom and it is up to us to limit that freedom according to knowing what we know and what we don't know, practising what we do want to do and stopping when we don't feel we're capable of practising. (Participant 3)

However, once this had been overcome the doctors began to treat the pharmacist with greater respect and recognise their role. One pharmacist spoke of being treated 'more like equals now.'

In community pharmacy where the pharmacist was outside the practice setting, it could be suggested that the lack of opportunities to develop ongoing relationships with

other health care professionals has the potential to hold back supplementary prescribing.

This suggests that supplementary prescribers are still in many cases at the stage of having to establish their credentials and to prove their competency to work in the prescribing role. In order to do so they needed a great deal of self-confidence and a certain drive to overcome conflict. As the role became better recognised and more was known about it by other health care professionals then it might become easier to extend and develop the role.

5.4.5 Reality of the Supplementary Prescribing Role

Dealing with Patients

Referral Procedures and Obtaining the Agreement of the Patient

Referral procedures varied from practice to practice within the primary care setting. Some were quite formal with written requests from doctor to pharmacist, usually by e-mail, others not quite so formal with the GP making a verbal request that the pharmacist take over the prescribing for certain patients. In some cases there were no actual referral processes with patients being sent letters from the practice administrator asking them to make an appointment with the pharmacist for a medication review. Where the referral process had been a formal one the participants said that the GP would have spoken to the patient first:

Most of the doctors would say 'We'd like you to see the pharmacist for your blood pressure'. How much information they give does vary. So the idea is they actually plant the idea into the patient's mind so when you actually contact them for an appointment the patient isn't that surprised, they say 'Oh the doctor did tell me I would be seeing the pharmacist'. The doctor will then explain in more detail to you when you see them. (Participant16)

The same participant prescribed for more than one practice/GP and said that the referrals came in a variety of ways:

In some of the practices the doctors will highlight a patient with blood pressure that they want me to monitor and they'll send me an email or a note on the computer to say can you keep a check on this patient. Other practices the patients might be the ones that I have picked up or it maybe ones, for example the nurse or the reception staff might have picked up who perhaps hasn't been coming in very regularly, so we might need to look at their medication compliance and review as well. So you may start with say a medication review and then realise that patient might be suitable for supplementary prescribing. Of course I come across a couple of patients where I'll see them for smoking cessation so they're actually patients that want to give up smoking so I'll see them for that. But then I've picked up with the patients as hypertensive that could be suitable for supplementary prescribing. (Participant 16)

Most primary care participants reported that they had set up referral procedures appropriate to their setting and according to the needs of the patients. Much of the paperwork concerning patient referrals and appointments was carried out by administration staff and this team approach had been adopted in most primary care settings.

In the hospital setting where pharmacists were managing patients' medication on the wards, there was no referral system. All participants from this setting said that their job had always been done in this way and they made daily visits to their wards to check medication charts and patient records. During this time it was likely that they would have conversations with medical or nursing staff about patients' drug regimens and give advice accordingly. The participant mentioned earlier who specialised in one particular medication's monitoring, counselled most patients on their drug therapy prior to discharge. Such patients were either 'picked up' on the daily ward round or the pharmacist would receive a phone call from the nursing staff to tell her when patients were being discharged.

The guidelines for supplementary prescribing practice state that the process needs the agreement of the patient. In primary care, some GPs asked the patient if they were happy for their future care to be managed by the pharmacist. In other cases the agreement of the patients was not sought until they had arrived for their appointment with the pharmacist, having received a letter from the practice outlining the procedures. In this case agreement could be inferred from the fact that the patient had attended, but all pharmacists said that at the first consultation they explained supplementary prescribing to the patient and asked them if they were happy to be cared for by a pharmacist. However, one participant said he was not sure that all patients understood the implications of supplementary prescribing:

Virtually all patients who have had our supplementary prescribing explained to them, have really all agreed to it. I'm not totally convinced that they've all understood totally what it involves but I think they all agree that it's fine for pharmacists to prescribe and that it's quite interesting. (Participant 16)

Time for Consultations

In the primary care setting the time pharmacists allowed for their consultations varied from 15 to 30 minutes depending on how many patients were booked in for a particular clinic. Some said that when they first began to prescribe they allowed more time but as they became more expert in consulting skills they were able to reduce that time. All said that consultations times were patient driven in that if they were aware that a first attendee had a complicated medical history, they would allow a double appointment for them. Some pharmacists who had well established, busy clinics said that during clinics patient consultations took precedence but this sometimes left them little time to write up reports and make referrals if necessary. Participants said that time management had probably been the most difficult part of prescribing as they needed more time to reflect on their decision making.

One participant said that she had tried to cut down her consultation times from 30 to 25 minutes but *'it was a nightmare and it was so rushednot every patient needs half an hour, some need more but that gives me time if I have to speak to the doctor – I can wait in between the doctor's patients, I can pop in'*. (Participant 13)

Another participant raised the issue of being cost effective in terms of time taken for consultations, she said:

I think that you have got to be very careful if you say half an hour per consultation. You are going to price yourself out of the market and if a doctor's 5 – 10 minutes, nurses 10 – 15 minutes, if you don't compete with them then you have got to get up to speed. Who's going to want a pharmacist supplementary prescribing if they can get a nurse and it's cheaper? (Participant 12)

While there is a tendency to directly compare different professionals' consultation times, it may be that each provide different types of services and, as such, not directly comparable. In addition, with experience, pharmacists may be able to reduce their consultation times as they learn how to better control the consultation and refer patients back to their GPs.

In the hospital setting, most participants said that although they were often very busy working in the pharmacy and on the wards, they undertook their ward rounds at their own pace and were generally happy with the amount of time they were able to spend with their patients. For one hospice pharmacist, though, becoming a supplementary prescriber made her realise just how much time patient consultations can take:

In the hospice it's very different in that we don't limit time for patients because sometimes during a consultation they'll mention something that needs a long discussion. So for some patients the chat about their medicines can be 10 minutes which is a normal time but for others it could be an hour, an hour and a half and that was part of my learning process as part of the course. I was chasing the junior doctors for their prescriptions and they were still walking round with the consultant seeing patients. I had no idea really that the consultations took so long and really was so encompassing. (Participant 18)

However, like other health professionals, pharmacists worry about time pressures and the safety of their practice:

...we are always busy and sometimes it is difficult to do and sometimes we have to leave work to the next day which would have been better dealt with the same day ... you're not safe to work. It's like you know doctors doing long hours it is not safe for us to work ten hours plus a day so, so we just leave it. (Participant 14)

Consulting Skills

All participants were asked their feelings about undertaking patient consultations, whether their training and experience had helped them in the development of these and whether they had encountered any patient situations that they had found difficult. All participants from the hospital setting said that as their role already involved substantial amounts of patient contact, they did not feel that their day to day dealings with patients had changed. However, there were some concerns that the supplementary prescribing role might demand greater clinical skills and one participant who had not yet begun to prescribe said she still lacked confidence in this area:

Some of the clinical stuff that pharmacists traditionally have never got involved with I still lack a bit of confidence with. If you were working in a role where you had to examine patients you know the hands on stuff, if you were working with say a respiratory patient, if you've got to check their chest, you know all the tapping on the back and percussion sounds. Pharmacists don't touch patients. So even taking peoples' blood pressure, I still don't feel 100% confident with any of that. If I had to do any of that in my new role I would have to go and get some more practice with all that. We all went into pharmacy because we didn't want to get our hands dirty, and now we might have to. (Participant 19)

Another participant in the hospital setting, prescribing for terminally ill patients, highlighted a further issue connected to consultation skills concerning how difficult it

was to deal with patients who are dying. This extract demonstrates how complex the pharmacists' supplementary prescribing role can be:

The only time that I've found it very difficult was dealing with other peoples' emotions. I always think the difficult one is 'where do you want to die?' because that is a question that you have to know because we have to be able to prepare medicines for them to go home at any moment if their condition changes suddenly. It's a question that you have to ask people that sometimes they're not ready to answer because they're not really thinking that's where they've got to in their journey of life. (Participant 18)

Here, the process of prescribing for vulnerable patients involves issues which many pharmacists may not have had experience of and shows how different situations demand the development of different consultation skills.

The majority of participants from the primary care setting did not report any particular problems with patient consultations. One participant, however, said the main problem was closing the consultation:

Yeah, I am not very good at closing them because I could just talk to patients forever and most of them are elderly and when they get all their tablets out and they have actually got a healthcare professional for more than five minutes, they get quite into it. By the time I've taken their blood pressure twice and gone through their bag of medicines I find it really hard to close the conversation. (Participant 12)

This issue was explored with other participants in this setting and one said he had no problem with closing the consultation '*I only need to stand up and open the door and people walk out – I'm astounded!*' (Participant 10).

A community pharmacist who worked part-time for a GP practice talked of how conducting patient consultations was simply an extension of the role he had been in for many years, talking to and advising patients 'over the counter':

I didn't have a problem at all ... being a pharmacist for over 25 years you develop your skills in the pharmacy. It's slightly different in a surgery setting, but the basic consultation skills are there and it was just sort of a gentle change.... In the old days it used to be over the counter but we have consultation areas now ...and it is just a bit more in-depth in a practice setting. (Participant 4)

Participants were asked if they had ever had to manage what they regarded as a difficult situation with a patient. Most said that the only problems they had encountered concerned patients who had asked them to prescribe something which was not on their clinical management plan. This issue was raised when participants were talking about clinical management plans and will be discussed further in a later section.

Participants were also asked whether they believed they had the trust of their patients and most felt that the general public had experience of seeking advice from a pharmacist in a community setting and so did not find it unusual that a pharmacist would be managing their medicines within a practice or hospital setting. One hospital pharmacist suggested:

...many members of the public don't have the full confidence in doctors and perhaps trust the pharmacist more.... They often say to you when you are going round the beds at the hospital, you know, if you're talking to them about smoking or alcohol, they will give you more close to the truth and they don't tell the doctors. (Participant 19)

Effects of SP on Patient Care

Generally, participants who had begun their supplementary prescribing practice felt that their new role had made a significant contribution to improved patient care. Particularly in the primary care setting, pharmacists said they had received a positive response from the patients in terms of extra time to talk about their health; in depth advice about their medicines; not having to see their GP to obtain prescriptions and accessibility to general health care advice.

Time to Talk

As suggested earlier, one of the benefits of SP reported by participants was that they were able to give more time to the patients, in comparison with medical colleagues, which enabled them to discuss their health in greater depth. In the following extract a pharmacist discussed taking patient care to a different level:

I take it to another level and address more holistically what their needs are, so they come away feeling, you know, quite surprised at the level of care that occurs, and that's good. (Participant 1)

This is echoed by another pharmacist working in a GP practice:

I think patients want to sit down and talk, quite often they've not had the opportunity to do that because the doctor has got 7 minutes or 12 minutes – whatever – and he's got to see the next one and I've got some time for people. I think patients like it very much ... and you see them more often, you don't just see them as a one-off so you get a relationship going which is very nice, a real luxury, it's much nicer than just seeing people once. (Participant 8)

Medicines Advice

All participants, in all settings, said that the biggest contribution they could make in terms of patient care, concerned medication advice which they felt could lead to greater compliance. Pharmacists believed that their knowledge of medicines was greater than that of doctors and that they were more likely to take fuller and more accurate medicines histories than doctors. The benefits of this to patients were that there was an increased likelihood that the correct medicines would be prescribed, in the correct doses reducing the risk of errors.

In terms of compliance pharmacists felt that the more patients understood about their drug therapy the more likely they were to comply and that the time taken by pharmacists to provide the patients with such information and being able to prescribe, could only improve care:

...there are really simple things you can do, in the elderly care reviews you'll come across people that have just stopped taking their medicines and you can restart them on the spot and that's the best bit about it. (Participant 11)

A hospital pharmacist also talked of the importance of patient education:

It's bound to make a difference because you anticipate problems rather than waiting until they've happened and then correcting them retrospectively. Also the emphasis is on patient education as well, which takes quite a bit of time because well, just speaking to them to find out about a drug history. You can also use your time to explain what the medicines are for so you are increasing your opportunity to increase patient knowledge which is also the way we're all supposed to work and is much more rewarding. (Participant 2)

Accessibility

Participants in primary care said that one of the improvements mentioned by patients since pharmacists had been conducting clinics, was that they had increased access to health/medicines advice than they had before. Some pharmacists said when they first saw a patient they would tell them that they could be contacted by phone or in person should the patient require advice in the future. This was felt to be of great benefit as many patient queries were simple and easy to deal with but patients would be unlikely to make an appointment to see the doctor to ask for such advice. This reduced the chance of patients not being able to seek advice about problems which may have the potential to become more serious. One PCT pharmacist summed this up by paraphrasing her Trust's mission statement '*Patients have the right access to the right people, right medicines, at the right time*'. (Participant 12)

Prescribing

A key aspect of this research was to investigate pharmacists' experiences of prescribing and so questions about this formed a large part of the interviews with participants. In this section we explore the reality of the prescribing role and why, in some cases, pharmacists have not yet begun to use their prescribing skills.

Reasons for Non-Prescribing

Seven of the twenty-three pharmacists interviewed for phase 1 had not yet started to prescribe. Reasons for this ranged from organisational and clinical governance issues to not being able to identify a suitable area in which to prescribe. A hospital pharmacist who had studied in the first cohort in her region and had been qualified in supplementary prescribing for one year described her situation:

The view they [managers] are taking with supplementary prescribing is that they want all of us who are in a position to become supplementary prescribers to take the course and get the qualification. Then to develop the pharmacy service that is offered to patients in the hospital as a team approach. So rather than having individual pharmacists working with individual clinicians, say doing out-patient clinics, they are going to try and make the system work so that a team of pharmacists can work with a team of doctors. (Participant 19)

Another pharmacist, working as a PCT pharmacy advisor was not prescribing because she had changed jobs and had not yet developed her role, she said, '*I'm not non-prescribing because I can't prescribe I should be prescribing but I just don't have the time*'. (Participant 7)

As discussed in section 5.4.3, a number of primary care pharmacists continued to work in their previous role running medication review clinics but could not generate prescriptions as the computer software was not available, and they were reluctant to hand-write scripts.

The other bit is the writing of the prescription itself, because we have got to hand write our prescription. In order to put your prescribing data onto the PPA, prescribing database, you have to have it under your own name. So I spoke to a supplementary prescriber who was a nurse, what she does is she prints an electronic one so that goes into the patient notes that you have prescribed something, and then she has to hand write a duplicate version, sign it on her own prescription pad, so that it goes to the PPA [Prescription Pricing Authority] and it is registered under her name that she has prescribed this drug, so that is what I will have to do until they sort something out. (Participant 1)

Currently, the capability is not in place for the NHS computer software to generate prescriptions in the name of the supplementary prescriber, although it is understood that this will be possible in the near future. Until such time, one primary care pharmacist described the complicated procedure she and her colleagues had to go through in order to generate prescriptions for her patients:

I know of one nurse who has managed to get a GPass [computer software] to print them blank and then she stamps them. But I was in another practice trying to get them to come up blank for our nurse to stamp them and I can't do it so I need to go and speak to the other practice and find out how they've done it. (Participant 13)

When asked if this was a major stumbling block she continued:

Oh yes, everybody will tell you that. Is it quicker to put it through the computer and print it off, run next door get the doctor to sign it and run back? And that's the problem and that is why a lot of nurses don't prescribe because it's quicker for them to [get the doctor to sign] it is a pain in the backside and anybody that runs a clinic will tell you that that's what annoys them the most. I get round it in a lot of ways... (Participant 13)

It is understood that some of the technical difficulties encountered in being able to generate and sign off on prescriptions as a supplementary prescriber have been addressed since these interviews were undertaken.

The Status of Prescribing

Participants alluded to the increased professional status associated with prescribing. With regard to nurse prescribing, there were those who felt that pharmacists had to prescribe to keep pace with the expanding role of nurses as this was a role for which pharmacists were better suited:

For me it's more logical for pharmacists to prescribe than it is nurses. I know that nurses are, in terms of making physical examinations on patients, very well trained - much better trained than I am but in terms of actually looking after medication I feel it's more logical for pharmacists to do that. I know that doctors are very worried about their loss of power if you like, letting go of prescribing is quite hard for doctors they've had a monopoly on that for so long. But I think as other professions come in and take on different bits of prescribing its only logical for pharmacists to be in there really. (Participant 8)

In primary care, one participant felt that physically writing a prescription was not as important as conducting a thorough patient consultation. It was this which should be the focus of the enhanced pharmacist's role as a supplementary prescriber:

I think when I first started writing prescriptions, you talk to other prescribers who perhaps already prescribed, the main talk is always about 'oh I've written my first prescription', 'I've gone through my first pad' and after a few weeks I realise oh it doesn't really matter about how many prescriptions you write or how many pads you use, it's how you manage the patient. You could manage a patient without writing a prescription so really the number of prescriptions you write isn't really a good marker. (Participant 16)

This pharmacist seemed to be reminding other SPs that it is the process of ensuring optimal medication use which is important - and not a pharmacist's increased professional status made possible by having the ability to prescribe.

Prescribing Safely

The converse to the increased status associated with prescribing is the increased responsibility that came with it; most pharmacists were confident in their abilities to cope with this. However, some primary care participants expressed concerns about this responsibility:

I'm happy as long as I don't think about it too much, because it can get a bit scary.... I mean I'm happy with the current role I'm doing and the key thing I keep saying to myself is if in doubt, don't do it (Participant 1)

In general, though, primary care pharmacists said although they felt a little unsure of themselves when they first began to prescribe their confidence grew with experience.

As stated in section 5.4.3, supplementary prescribing is not generally recommended for patients with multiple disease states. Some pharmacists found that, in reality, this was something they had to deal with regularly in their clinics:

When I was doing my supplementary prescribing course I was told that supplementary prescribing was not appropriate to use it in medication review clinics and that's where I am using it and I really see that's where its place is ... I'm prescribing for people with hypertension, hypothyroidism, hyperlipidaemia, diabetes. (Participant 12)

On the contrary, another PCT participant was adamant that the guidelines should be adhered to and insisted that he always referred such patients back to the GP for review.

No they understand I make it clear to them what I'm looking after and also if I find something else they'll be sent back to the doctor. I make it clear that they can go back to the doctor at anytime and it can be their decision, my decision or the doctor's. (Participant 17)

All participants indicated that they were meticulous about their prescribing practice and this extract illustrates how they are reflecting on their prescribing practice and innovating changes to ensure safe practice in prescribing continued:

Prior to the pharmacists signing off prescriptions there were two checks: the doctor was writing the prescription and then I was checking it and making the suggestion. This time the doctor writes the prescription and then I make the renal dosage adjustment and then there is no check. There is no reason to think why pharmacists couldn't easily make a mistake, so I've had a second pharmacist do an audit of the prescribing on ICU go through everything as a check really. It's still a system which is relying on one person which is a bit arrogant to think that we won't make mistakes. (Participant 21)

Is this Prescribing?

A final, but important question which has emerged is the definition of prescribing. This issue was apparent in the hospital setting where traditionally, pharmacists have been responsible for recommending drugs and dosages, and have the authority of their employers to do so. The following two extracts illustrate this fundamental issue.

But there's some question now whether this dose adjusting, the doctor writes the prescription and then we constantly adjust the dose, you know it's certainly not a patient group direction, is it a prescribing activity? You know it's a bit of a grey area really, but we will move over to independent prescribing. I am certain and it will free us from the [consultant] which you know they want really and what we want because today I had to go running all round the hospital to find somebody to sign a prescription. We know that patient better than anybody else. Somebody else, who barely knows the patient, they have to rely on our assessment of the situation, has had to sign, which I think is unethical for the doctor to sign the prescription. (Participant 14)

....within the hospital setting we don't have prescriptions. We might call and order a prescription but it's an authorisation to administer and an authorisation to supply which isn't necessarily a prescription. Which means all our forms are prescribing or not? You've now got a need for legislation that suggests that you have got to have an agreed clinical management plan. You've got to have all these criteria fulfilled. You then think people were prescribing before there was a need for legislation. Now that you've got legislation does that mean what you were doing previously was wrong? (Participant 6)

5.4.6 Future Practice

By the end of the phase one interviews it became clear that there were a number of areas of both training and prescribing practice which pharmacists felt could have been better thought out either at national or local level. Many of these issues warranted further investigation and so it was planned that this would form part of the case studies of phase 2. However, the issue of implementation and support will be briefly considered here.

Hindsight

Some participants felt that in practice there was a considerable amount of confusion amongst pharmacists across all settings about how supplementary prescribing should be implemented. One PCT pharmacist said *'I think it wasn't thought through enough prior to the implementation and I think that the people on the ground weren't consulted enough'*. (Participant 7)

This pharmacist was asked what she would have said if she had had the opportunity to advise on the development of supplementary prescribing practice:

I think I would probably have said they should have a huge publicity campaign to GP's because I think a lot of the problems is that a lot of pharmacists are keen to do it but you can't get the mentors, there is no incentive for them they haven't got a clue about it I was interviewed for this job I had the general manager of xx who was brilliant at his job. I had the lead GP from the area and the lead GP from the XX and a couple of pharmacists. They were going through my application form and somebody mentioned supplementary prescribing and the two GP's and the general manger went 'What's that'.. now that is really forward thinking, you know this involved heads of a PCT and they didn't even know what supplementary prescribing was. (Participant 7)

Independent prescribing

The majority of participants believed that Independent Prescribing was the way forward for pharmacy practice, particularly those from the hospital setting. One of the reasons for this was that participants felt constrained by the clinical management plans and becoming independent prescriber would mean CMPs would not be necessary:

That would be the way to allow us to adjust medicines that have obvious errors, but basically at the moment despite the fact that it's really obvious that it's an error the only way to solve that would be to go back to the doctor and get it changed. If it was one of the drugs or types of drug treatments that you were dealing with under a clinical management plan then you could adjust those but it's, a patient doesn't just have those things wrong with them, so you could spot something really simple but if it falls out with your clinical management plan there is nothing you can do except go back to the prescriber and the only way around that is independent prescribing. (Participant 2)

However, in the primary care setting, although participants felt that independent prescribing should be the ultimate goal for pharmacy practice, many had not had sufficient time to develop their skills as supplementary prescribers. One experienced supplementary prescriber felt that there should be different prescribing roles according to different situations:

I think it's one of the roles that we can play ... don't leave behind other roles. I think prescribing advice is still a big role and the strategic work is a big role and obviously supplementary prescribing is a role that we can use for specific patients. What you have to think about, is you can have an input but it's going to be on small numbers of patients so where as prescribing advice you can have input on a much bigger group of patients so I think that it's different strategies for different situations and I think pharmacists have just got to be careful that we go in and we show what we can do and perhaps show doctors the difference we can make to patient care with supplementary prescribing, because I think that is where we'll get the benefits and that is the way that we should perhaps be evaluating it. (Participant 16)

This cautious approach was echoed by another pharmacist working for a GP practice:

I think it's a really good step forward for pharmacists, but I don't think supplementary prescribing is where the pharmacist can be best used, put it that way. I think from my experience, if we do go to independent prescribing.....I think that is where the greatest benefit will come from and I think the quicker we go through that maybe the better. But it is a good step.. a good intermediate step (Participant 1)

5.5 Discussion: Phase 1

The main purpose of this discussion is to summarise the key issues from Phase 1 and highlight some issues concerning supplementary prescribing which will be examined further in the phase two case studies.

The length of time as a practicing pharmacist for participants in the first phase ranged from 9 years to 30 years, with the average being 19.3 years. This was somewhat surprising as it might be expected that those newer to pharmacy might be the ones who would take up the opportunities offered by training in supplementary prescribing. Nonetheless, all of those interviewed saw the new role as a challenge and as the appropriate way forward for pharmacists in all settings. It was clear that the pharmacists who had agreed to take part were particularly enthusiastic about the progress of pharmacy practice and adept at meeting the challenges inherent in implementing new practice. Therefore, our group of pharmacists may not be representative of pharmacists as a whole but indicative of those who are 'early adopters' of innovations in practice. These participants expressed a desire to have a greater responsibility for those areas of the doctor's role about which they feel they have knowledge – being able to prescribe correctly for medical conditions.

Participants reported no particular difficulty in obtaining funding to undertake supplementary prescribing training or in finding a DMP. Funding did appear to be more readily available in the secondary care setting. As we only interviewed pharmacists who had received funding, it would be interesting to hear the experiences of pharmacists who had been unable to undertake supplementary prescribing training because of lack of funding or an inability to find a DMP.

Participants were all experienced pharmacists who had built up strong relationships with doctors over a number of years and in particular their DMP. Trust was a key element of this relationship. The relationships with doctors in all settings had been particularly useful during training as the opportunity to 'sit in' on consultations provided a valuable insight into how pharmacists could conduct their own patient consultations once in practice. It was particularly interesting to hear the story of one pharmacist in primary care who had had the opportunity to observe patient consultations within the secondary care setting. He said that this enabled him to take a more 'holistic' approach to care in terms of seeing how care was provided across the primary and secondary care sectors. It could be suggested that this cross-discipline, cross-setting experience might be a valuable addition in the supplementary prescribing training process, to both improve relationships with other health care professionals and provide a greater understanding of patient care. Some participants reported a degree of professional conflict between their prescribing role and that of nurse prescribers. Others had found working within a multidisciplinary team a rewarding experience saying that they had learned many of their skills from talking to and observing nurses and doctors.

There was a suggestion that there needed to be clearer boundaries in terms of whether, during their patient consultations, pharmacists were being expected by patients to diagnose medical conditions. Most participants said they had no desire to take on the diagnosis of conditions but felt they were better trained and equipped to prescribe. The on-going relationship with IPs and other health care professionals were explored from both the point of view of the pharmacists and their colleagues, in phase two.

Pharmacists on the whole reported that they found that the course had provided the content they had both expected and required for supplementary prescribing practice. However, the aspects they found most valuable varied according to their background and place of work. Those in secondary care, and to an extent community pharmacy, tended to express more confidence in dealing with patients as this was a usual part of their existing role. The diversity in background of course attendees was reported to be one of the more positive aspects of the course, referred to by participants. Most found it both interesting and useful to engage with pharmacists from settings other than their own and said they learned much from the experiences of others.

Generally, participants felt that the course workload was very intensive and demanding, especially where they were in full-time roles and had their domestic lives to consider. Some said that achieving a work/life balance whilst doing the course had been difficult and one went so far as saying that her whole life was 'put on hold' for the duration of the course. The fact that such pharmacists still persist with their supplementary prescribing training indicates a high level of commitment both to their employers and to pharmacy practice in general.

One of the overriding impressions which resulted from this phase of research was that the reality of supplementary prescribing was quite different from the theory. For those who had little or no experience of undertaking patient consultations and making prescribing decisions, it was evident that there was a steep learning curve to be made once training was completed and the reality of their situation became apparent. In some cases pharmacists felt that the level of understanding of the changes with respect to prescribing was poor and, because of this, there was a lack of clear guidance from employing authorities. In some cases, participants felt that this lack of understanding had prevented them from developing their role. Although there was a variety of reasons for non-prescribing, some said that either they or their employing authorities had not thought the process through sufficiently, prior to the pharmacists undertaking the course. This had led to delays in practice which might have been avoided with more foresight.

For some participants the delays in setting up their prescribing practice had been lengthy, and at the time of writing this report, some who had undertaken training in the early cohorts, were still not prescribing. This raises some worrying clinical governance issues about whether the skills which those pharmacists gained during training have lapsed due to lack of practice. Although, this issue was explored with participants and they said that if they did not feel competent to prescribe they would seek advice from colleagues, only time will tell whether this lack of practice will affect patient care.

Essential to safe and effective patient care is access to patient medical notes and whilst pharmacists in the hospital setting appear to have good access to records which they find easy to use, for those in the PCT/GP setting this was not always the case. In the community pharmacy setting the lack of access to patient notes was a significant barrier to pharmacists prescribing. Although we interviewed two community pharmacists who had overcome the problems of computerised access to patient

records, they said this had been a lengthy process which had in itself raised issues of patient confidentiality and consent were explored in the case studies.

Throughout phase one, participants talked of the difficulties they had introducing the use of clinical management plans. Although some participants from each setting have successfully set up the use of the CMP this was felt to be a lengthy process involving a significant amount of trial and error. Issues such as prescribing outside the boundaries of the CMP; prescribing for co-morbidities; pharmacists' concepts of safe practice and whether or not the practices of some pharmacists actually constitute prescribing, were further investigated in phase 2.

In spite of the many problems some participants had encountered setting up their prescribing practice, this did not have appeared to have detracted from their enjoyment of the role and most displayed a positive attitude towards supplementary prescribing which they felt would bring greater job satisfaction for them and benefits to the patients. Such benefits included improved advice about medicines usage which they felt could improve compliance amongst certain patient groups; better access to health care advice and increased time for patient consultations.

6. Phase 2: Case Studies

6.1 Method

For this phase of the evaluation of supplementary prescribing, the sampling frame included those pharmacists who participated in the Phase 1 interviews who gave agreement to participate in further case study research. Pharmacist case study sites were selected for their diversity with respect to prescribing setting (PCT, community pharmacy or secondary care), breadth of clinical areas in which prescribing occurred (single/limited range of clinical areas or generalist prescribing such as medicines management, admission or discharge prescribing) and systems of work in the prescribing setting. Variations in the systems of work in the prescribing setting are crucial to understanding the range of factors affecting a successful supplementary prescribing environment and might include variations in pharmacist referral procedures or setting organisation. Five case study sites were selected and interviews were conducted between April and August 2005. Participants varied between sites, dependent upon the nature of the prescribing context. The aim was to include the views of the pharmacist, the independent prescriber, a practice nurse or nurse practitioner, a member of the administrative team, pharmacy technicians and up to six patients at each site. There was scope for others to be included if the pharmacist could suggest other colleagues who might have views on the role. In addition to the interviews, patient consultations were observed (once consent had been obtained), and notes were made about the consultations using a checklist. The researchers also collected CMPs for comparative purposes (see Appendix 3).

6.2 Data Collection

Prior to visiting the case study sites a case study protocol was developed. This included topics to be covered (including themes of relevance emerging from the interview stage); evidence to be collected – type (interviews, observation of consultations, documents such as CMPs, guidelines and protocols, local procedures) and source of evidence (pharmacist, patients, doctors, others in the setting likely to be affected by the SP role); and fieldwork procedures (e.g. the use of field notes and possible data collection forms which will need to be devised by the researcher). It was intended that data collection would include observation of pharmacist-patient

consultations, interviews with approximately 6 patients at each site who had seen the SP and an examination of documents such as the CMP. Interviews with the patients covered issues such as general attitudes towards the pharmacist as prescriber; views on the pharmacist's knowledge and expertise to act as a prescriber; whether they needed to consult different prescribers for different clinical problems; and perceptions about the level and amount of information provided. The guide for observing pharmacist-patient consultations is given in Appendix 4. The type of data collected was reflected upon and refined in the light of Phase 1 preliminary findings.

6.3 Results: Phase 2

6.3.1 Participants

Pharmacists who agreed to take part in the case studies were asked to provide details of colleagues with whom the pharmacists worked most closely and who might be most affected by supplementary prescribing. The organisation of the case studies took a considerable amount of the pharmacists' time and it was anticipated that the researchers would need to be flexible in their approach as each case study would be unique. Twelve pharmacists who took part in the phase 1 interviews had expressed initial interest in taking part and they were contacted formally to see if they were still happy to do so. Of these, seven declined and five agreed. Details of these are given in Appendix 5.

The initial plan was to have 5 to 7 case study sites. As the five consenting sites included two hospital, two primary care (general practice) and one community pharmacy, efforts were made to recruit another community pharmacy site. When this proved improved impossible, it was decide to conduct a diary study with one (non prescribing) community pharmacist who was in the process of setting up his prescribing practice. This small diary study is given in section 6.5.

During the course of the case studies, interviews were carried out with DMPs, IPs, pharmacists, practice nurses (some of whom were qualified as both supplementary and independent prescribers) and doctors other than IPs both in the primary and secondary care setting. Details of the participants are given in Table 2.

Table 2: Phase 2 Participants

Case Study	Pharmacist's Setting	Independent Prescriber Interviews	Pharmacist Interviews	Other Doctor Interviews	Nurse Interviews	Admin. Staff Interviews	Other Staff Interviews	Patients Observed	Patients Interviewed
1.	Hospital Specialist pharmacist	1	1	1	1	0	0	0	0
2.	Independent Community/ GP practice	1	1	0	0	1	1 Pharmacy technician	5	4
3.	Full time in GP practice	1	1	1	1	1	0	5	3
4.	Hospital Single Medication Monitoring	1	1	0	0	0	1 Senior Pharmacist	3	1 Telephone interview
5.	PCT pharmacist advisor/part time GP practice	1	1	0	1	0	0	2	2
Total		5	5	2	3	2	2	15	10

The data were analysed using the same process as for phase 1 (see section 5.3.2). The findings of phase 2 reported below describe the participants' experiences of supplementary prescribing and extracts from their narratives are shown in italics in the text. To organise the data, each section is prefaced with a question which emerged from Phase 1.

6.4 Findings of Phase 2

6.4.1 Doctors' Views on Being a DMP

Participants had said that the observation of patient consultations by doctors had been one of the most useful aspects of their training. How did doctors find the experience of being a designated medical practitioner (DMP)?

In the hospital setting the observation of patient consultations seems to have been more informal than in the primary care setting. One hospital DMP appeared somewhat vague about how valuable such observation had been to the pharmacist saying '*he used to come on the ward rounds with us quite regularly, so he would have learned quite a lot about communication, but that would be informal observation ... we didn't do any formal kind*' (DMP CS 1). Another hospital IP said he did not find the process particularly time consuming but said his problem was '*disentangling what would be the process of mentoring from the usual process of discussing clinical problems*' (DMP CS 4).

In the primary care setting the observing of consultations seemed to be more formal, with pharmacists arranging times with their DMPs which coincided with consultations, which they or the DMP felt would be of value. It could be suggested that this more formal approach is due to the nature of general practice, where doctors spend more time conducting consultations as part of specified surgery sessions than hospital consultants.

One GP did express concern about whether the support he gave as a DMP was adequate saying that his main worry was whether he gave enough time to the pharmacist:

I'm not sure whether I was able to do what he wanted me to do, he seemed happy with it and I'm sure he would have come and told me if there was anything else that he needed or if there was something I wasn't doing. (DMP CS 2)

Another GP made an interesting comparison between pharmacists' and medical students' attitudes towards observing patient consultations. She said that with medical students she had to take time to draw them out and '*they're happy to be a fly on the wall and not to do so much unless you encourage them. Whereas the pharmacist was desperately keen to do things and asked questions and was a much more active participant*' (DMP CS 3).

The DMPs were asked whether they felt their role could have been better supported and if so by whom. As part of the SP's training, DMP support is a role which should be provided by the SP's academic institution. A primary care DMP said that she did not feel she needed support during her mentoring of the pharmacist, which was her first experience of this, although she had mentored a nurse prescriber. However, she did say that her attitude would have been different if the pharmacist exhibited weaknesses as she would have been unsure how to deal with this:

The difficult bit would be if someone was not doing well, if you're beginning to have concerns that would be a very difficult role...if I was doing it with someone I'd never met before and they turned out to have weaknesses I would have needed support to know how to address those (DMP CS 3)

This GP was unsure who should give such support but thought perhaps the opportunity to talk to others who had had the experience of being a DMP would be useful. This was echoed by a hospital DMP who said he would have liked support from the beginning, *'Having been a DMP for the first time I think it would have been useful to have some guidance on the best approach...one did feel a little bit isolated.'* (DMP CS 4)

This uncertainty amongst some DMPs about their role suggested that there was a need for more information about what the role required. While the university training the SP should provide support this may not have been widely disseminated to the DMPs.

All DMPs, however, said they would be happy to undertake the role again with other pharmacists and one even said that the experience gave him a new perspective:

It makes you think more about everything that you are doing, particularly the consultations, and review why you are prescribing and what alternatives there might be. Just in general it makes you think more about someone's [a patient's] presentation and the care you are giving. (DMP CS 2)

This GP was talking about how the process of being a DMP led him to improve the care he offered to his patients, which indicates that the DMP role may have benefits for more than just the pharmacist.

6.4.2 The Relationship between Doctors and Pharmacists

The ongoing relationship and the existence of trust between doctors and pharmacists was considered by pharmacists to be crucial to the success of supplementary prescribing. This relationship was explored further during the case studies.

Doctors' Experiences

In this section we report on the experiences of all doctors interviewed, including designated medical practitioners. Trust was key. In all cases this trust had built up over time and as such, a significant factor in the building of the relationship was the length of time the doctor and pharmacist had known each other. The doctors and pharmacists who took part in the case studies had all either known each other or worked together for some years. In one case a GP said he had known the pharmacist for more than 20 years and that *'we have grown grey together'* (IP CS 2). Another doctor talked of the relationship with the practice pharmacist which had grown through the pharmacist's previous role as a primary care trust pharmacy adviser. She said that the tenure of the relationship made it easier as *'it wasn't like trusting somebody that you weren't quite sure about, it was trusting someone who you knew to be competent'*. (IP CS 3). This participant went on to say that the advantage of having worked with someone for a long time was that she already had an insight into the pharmacist's strengths and weaknesses, prior to the pharmacist beginning supplementary prescribing practice. Equally, this participant said that she would be reluctant to enter into a prescribing partnership with a pharmacist she had not known for a considerable time.

In the case of hospital participants the relationship appeared to be based on a history of involvement in prescribing practice *'they have been heavily involved in clinical governance and risk management for example, in feeding back on prescribing errors and significant serious clinical incidents that might have involved drugs. I think they have adopted an increasing role over the years'* (IP CS 1)

Another theme which emerged from the data was that of respect for each other's abilities. A hospital doctor talked of the importance of working as a team and that in his case *'I think it works very well. We both respect each others capabilities'* (Doctor CS 1). Doctors reported that the teamwork approach was important in terms of sharing knowledge to ensure optimum patient care and it was clear from the participants' narratives that the pharmacists' role was continuing to evolve.

One GP talked of how she had found that over time she had begun to make more use of the pharmacist's skills and was referring patients to the pharmacist in situations where she was unsure of the best treatment, *'I will say to XXX 'I've got a problem with this patient how would you deal with it' so I think the referrals are going in the other direction'* (GP CS 3). Another GP felt that the pharmacist's role would expand in the future *'I think we'll be able to do more, I am thinking of XXX as part of the team and what he can do, where he can best be deployed'* (IP CS 2). This GP went on to say that although he had made no formal evaluation of any changes that might have been made to the practice, as a result of the pharmacist's increased involvement in patient care, he felt that his personal practice had changed saying, *'I am certainly more aware of what I'm doing'*.

Pharmacists' Experiences

From the pharmacists' point of view, the relationships they had built up over a period of time seem to have undergone more subtle changes. The most important change seemed to be that pharmacists felt that doctors had begun to realise that they possessed skills other than those traditionally associated with pharmacy practice. One hospital participant's role had evolved to managing patients in a clinic. This necessitated the building of relationships with doctors in both primary and secondary care and she talked of this change:

I think my role was always clinical, working at board level anyway so I always had good relationships with the junior doctors and consultants in the areas I was working. I think we also have more contact with the GPs and I think you develop a relationship, a working relationship with them which is different to the professional relationship you had when you were a pharmacist. They used to occasionally have to speak to you because they had an information query or if they were somebody that you knew from a time when they worked here. Now it's changed and there are several who will phone up and say I have got this patient on Drug X, what do I do about their other medication? And that is greatSo they do use our skills and expertise. (Pharmacist CS 4).

Whereas the above extract describes how doctors are approaching pharmacists for advice more often, a pharmacist working in a GP practice talked of her growing confidence in interacting with the doctors. This participant had not yet begun to prescribe at the time of her first phase interview but had since commenced prescribing, she said, *'I'm certainly happy going to any of them now than I used to be, I used to be a bit stand offish with a couple of them but I'm not anymore I'm quite happy to go and chat with them'*. (Pharmacist CS 5)

Other pharmacists talked of how, as their role developed, it brought a greater understanding on the part of doctors as to the skills and expertise the pharmacist could bring to general practice. One pharmacist talked of the changes she felt her presence had brought about:

I think it has improved medicines management and I think it's also helped improve the GP's understanding of how they can benefit from my role here and they can actually see some of the things I've done.
(Pharmacist CS 3)

6.4.3 Relationship with Other Health Care Professionals

The role of the supplementary prescribing pharmacist involves the building of relationships with other health care professionals. These relationships, too, were explored during the case studies.

Administrative Staff Experiences

As we discovered in phase 1, it was important for supplementary prescribers to establish good working relationships with other health professionals, in whatever setting they worked. This was found to be particularly important in primary care as they needed to have the support of practice staff in order to ensure patients were referred to them.

As one administrator suggested, to begin with there had been some concern amongst some practice staff about the pharmacist's role, *'I think they were a bit concerned to start with they said 'what is she going to do and how is it going to work?' because it's an unknown quantity'*. (Administrator CS 3)

However, this attitude had changed once staff realised what her role was, *'she certainly turned things around out there, she's given people extra responsibilities and she's now holding regular monthly meetings with all the team'* (Administrator CS 3). This was due to the pharmacist's efforts to inform her colleagues and to show them by her practice where her expertise lay. The comment provides evidence for our earlier view that those pharmacists who were most effective in carrying forward supplementary prescribing practice were those who saw themselves as innovators, willing to take up the latest developments and challenges in the profession (see section 5.4.1).

The same administrator talked of how their reciprocal relationship had developed and that they now worked as a team. She described how her reception staff even helped out in the dispensary if necessary:

She is very good for advice really and I link with her quite a bit on staff issues because we try to offer a bit of support ...so if I've got a spare receptionist we try to give them [dispensing staff] a helping hand.
(Administrator CS 3)

Although we were only able to interview two administrative staff, it was clear from their narratives that their own role had changed as the pharmacists' role had evolved. The other administrator interviewed who worked in a dispensing practice, said that she had now become medicines manager for the practice, having earlier undergone dispenser training. She had also recently completed a diploma in health and safety and, with the pharmacist's help, was running regular medicines audits, *'I run audits on random samples of patients, going through and checking their medication, making sure there is no old medication and it has the correct directions and sensible doses'*.

(Administrator CS 2). It would seem that she had taken over some of the tasks that had previously been carried out by the pharmacist and demonstrates that the expansion of the pharmacist's role had brought with it distinct changes in the dynamics of the practice team.

Nurses' Experiences

The two practice nurses interviewed both echoed the initial concerns of the administrators, that they were unsure of the pharmacist's role and it was something new being introduced to the practice. One of the nurses said that the concern was understandable:

I think probably we all had certain misgivings and concerns, but in saying that we were happy that it had been discussed and to give it a try and it has worked.... I suspect that everybody to begin with - with something that was completely different and new - would have some worries and concerns and if you didn't that would be odd wouldn't it?
(Practice Nurse CS 5)

The other practice nurse elaborated on this by comparing the practice pharmacist to those she had encountered in community pharmacies:

Initially I don't know that we actually understood what her role was going to be I think we all thought she was just going to run the pharmacy, set up a little area for patients to buy things - a shop as it were. I think that's how we understood it until she came into the practice and explained supplementary prescribing. Then we could see all sort of things opening up, all sorts of opportunities. (Practice Nurse CS 3)

This comment is interesting as it indicates that the role of the incoming pharmacist had not been previously explained to the practice staff. It might be expected that this would have been done by the GPs and that their failure to do so may be because they were not entirely clear themselves of what the pharmacist's role was going to be.

However, as the following two extracts show, once in post the pharmacists were regarded as an asset to the practices and that the nurses and pharmacists were collaborating in the provision of patient care:

I think the really useful thing, especially if we all work together, is that she can bring a lot of pharmacology knowledge that we haven't got and all of us, not only me as a nurse, but the GP's find it very useful and she attends our training meetings and it is a really valuable thing to do.
(Practice Nurse CS 5)

.....it's really good having her here and I've just invited her to come and talk to my diabetic group that we're planning, about medication. I was going to do it and then I thought lets ask XXX [the pharmacist] she's such a big resource and knows so much about it and I thought well she's the best person to do that so she's coming along to one of our evenings. (Practice Nurse CS 3)

During the course of the phase 2 case studies we were only able to interview one hospital based nurse specialist. Although she was very complimentary about the pharmacist's skills and knowledge, she did not have a close working relationship with him.

6.4.4 Conflict: defining the boundaries of care

Some participants had reported areas of conflict between them and other health care professionals. Some had said that there needed to be clearer boundaries between them and doctors. Had this conflict been resolved and had they experienced other conflicts?

Pharmacists' Experiences

During phase 1, the relationships between pharmacists and other health care professionals were generally good, with a high level of collaboration including the running of joint clinics in areas such as hypertension and diabetes. Pharmacists reported that this system was working well and that the multi-disciplinary approach to health care ensured that patients received the benefits of the expert knowledge of various health care team members. However, in our earlier discussion (see section 5.4.4) we reported on the experiences of one pharmacist who had not yet begun to prescribe because of conflict between her and one of the practice nurses. This relationship was explored further during a case study and it was found that the pharmacist was now prescribing but the situation had not improved:

....but the other nurse who is also doing similar work to me I think isn't going so well but I've heard it's not me it's problems throughout the practice, so I don't know whether it's just her as she is or whether it's (about) being threatened by me. (Pharmacist CS 5)

Although this pharmacist made light of the problems, they were clearly serious enough to make her consider leaving the practice:

There have been a few problems, I wouldn't say major onesif it's causing too many problems in the practice I'll go and do this elsewhere, to me it doesn't really matter where I do it. The GP's are very adamant they'd like me to stay and do it. (Pharmacist CS 5)

Reassuringly, this situation was not common. However, it does demonstrate how important the relationships between the professional groups are and how, when these relationships break down, it can have serious implications for pharmacy practice.

Independent Prescribers' (IPs') Experiences

There appeared to be few concerns about conflict between IPs and pharmacists, probably because the IPs were willing participants in both the pharmacists' training as a supplementary prescriber (acting as their DMP), and in providing ongoing support. However, a DMP in general practice did talk about one of his GP partners who had been opposed to supplementary prescribing from the outset:

One partner in particular is someone who's particularly conservativeit was somebody untrained coming into his area of work. That's my perception of why that person agreed grudgingly and may not refer many people to XXX. (IP CS 2)

It is impossible to say whether this attitude is widespread, but this would be an interesting area to explore in future research.

Some potential conflict was observed surrounding the area of diagnosis and this will be discussed in section 6.4.12.

6.4.5 Working in a Multi-Disciplinary Team

Participants from Phase 1 reported mixed views on working within a multi-disciplinary team, how was this working in practice?

Pharmacists' Experiences

It was clear throughout the case studies that supplementary prescribing can only be effective within a team setting. The pharmacist is dependent upon the doctors to refer patients to them and to provide advice and support; the practice nurses to provide shared care for patients and administrative staff to make appointments and to be the first line of contact for patients. This first line contact seemed to be extremely important as, if reception staff do not have a good understanding of the pharmacists' role or do not support it this will result in a lack of understanding on the part of patients (see section 6.6.1) and potential under use of the pharmacists' skills. One pharmacist working in general practice highlighted this:

I mean the reception staff are very good so if it's just a phone call then they check if it's a medication query for the doctor and if it is then they'll say 'well speak to our pharmacist first, she might be able to help'. Similarly, if a patient books in for a medication review with a GP they'll say 'oh our pharmacist deals with that, see her'. So they actually do the filtering that helps the patient understand what a pharmacist's role is. (Pharmacist CS 3)

This participant went on to describe how she was working with the practice nurse in shared clinics, *'I work with a nurse practitioner and we do all the simple blood pressures. We're going to take away all the diabetes and coronary heart disease reviews. I also take away a lot of the routine medication reviews appointments'*. In this situation the pharmacist was working hand-in-hand with the practice nurses and reception staff and it appeared to work well.

In the hospital setting it was evident that the pharmacists had been working as part of a team for some time, attending consultants' ward rounds and having day to day contact with ward staff. In one hospital, the pharmacist said he valued the opinions of the nursing team and regularly sought their advice about patients' conditions, which enabled him to prescribe more holistically (Pharmacist CS 1).

However, the other hospital pharmacist who participated in a case study described the problems she faced through a lack of teamwork, where patients' care was being shared between the hospital and the primary care setting. She said that once the patient was discharged, although she was reviewing their medication dosage in the clinic, they were technically the responsibility of their GP. Thus, if the GP was not readily accessible to give advice to the pharmacist there was the potential for the patient's care to be compromised:

It's quite clear when the patients are started in here especially for something XXXX for 6 months, we can cover them and we will review them at the end or the consultant will review them at the end. But we can't do that with the GPs so I think that is one of the big problems across the primary care secondary care interface which has not yet been addressed nationally or locally really. (Pharmacist CS 4)

The clinical governance concerns which arose as a result of the issue of shared care will be discussed further in section 6.4.8.

6.4.6 Patient Consultations

Some participants said that they found conducting patient consultations more difficult than they had expected, others had had substantial experience of interacting with patients, during direct observation how did the different pharmacists in different settings compare?

Twelve of the 15 patients' consultations observed were in the general practice setting. The opportunity to observe consultations in the hospital setting proved difficult. The nature of the hospital settings used was such that the pharmacists did not have a clinic with a number of patients pre-booked. Rather, they were conducting ward rounds to check medicines charts and answer questions from other health care professionals about patients' medication (see Appendix 5 case studies 1 and 4). This made it difficult to use the observation guide (Appendix 4) as this was found to be more appropriate for the primary care setting. In case study 1, the case study pharmacist was reluctant for the researcher to interview their patients given the sensitivity of the clinical area. In case study 4, three interactions were observed with the pharmacist counselling patients prior to discharge. Key notes about the patient consultation observations are given separately for the two settings.

Observations within the Primary care setting

- (i) The three pharmacists all either went out to the waiting room to receive the patient or stood up as the patient entered the room. They were all courteous and professional in their approach and were clearly trying to put the patients at ease. Where the pharmacist had not met the patient before he or she introduced him or herself and explained her job and the role he or she would be playing in the patients' care. In all cases the pharmacists asked the new patients if they were happy about this but no formal agreement was made and the patients were not offered the opportunity to see the CMP. In the case of repeat visits, the pharmacists greeted the patient in the same way and asked how they had been since the last visit.
- (ii) In each case patients were offered a seat adjacent to the pharmacist's desk in a non-confrontational pose which allowed the patients to break eye contact should they need to. The pharmacists all turned occasionally to look at their computer screen to check the patients' history.
- (iii) The pharmacists all appeared comfortable and confident during the consultations though one appeared keen to move the patients along. This pharmacist had a number of patients' booked in to the clinic and had said previously that she was under considerable work pressure at that time. She also seemed to be more conscious of the presence of the observer than the other pharmacists. The pharmacist's attitude changed significantly once she began to talk about the patients' medication, an area in which she was clearly knowledgeable (as were all pharmacists). Another pharmacist initially appeared nervous, as she explained to the interviewer beforehand that the patient could be 'difficult' and seemed a little concerned about the interviewer's presence in case the patient was confrontational.
- (iv) In most cases the patients appeared somewhat uncomfortable to begin with, especially those new patients who were having to cope with a new health care professional and an observer. The pharmacists all made attempts to put the patients at ease by making small talk and then concentrating on what the patient's had to say. However, in one case the patient said on two occasions that he was very stressed but the pharmacist did not follow up on this comment. The

patient suffered from hypertension and had come to see the pharmacist to obtain the results of a recent blood test to measure his cholesterol levels. The pharmacist focused on their clinical agenda, telling the patient that his levels were raised and as he also suffered from hypertension and was overweight, he had a 20% risk of suffering some form of heart disease in the next 10 years. It could be suggested that, given the patient's verbally expressed stress levels, the pharmacist could have tailored their approach to a more patient-centred agenda. Another patient kept referring to personal problems in her past and clearly wanted to discuss these. The pharmacist seemed aware of this but tried not to go into too much depth, as she clearly felt it was not within her role to do so, and the problems were not related to the patient's presenting condition. Afterwards, the pharmacist expressed a few doubts about whether she had dealt with the patient very well, as the patient was a strong personality and seemed to be trying to control the direction of the consultation. She felt she could have been more assertive. This raises the issue of whether or not pharmacists are always sufficiently trained to adopt a more patient centred consultation style and to take on the personal problems of patients. However this is likely to be a skill gained through experience and further time spent in the role is likely to enhance this.

- (v) The majority of patients observed readily asked questions of the pharmacist and were included in the decision making process. One patient was clearly unhappy about the prospect of further medication and told the pharmacist this. He dealt with the situation by quietly telling the patient the reasons for the proposed change and asked her to try it for a while and that if she was still unhappy they would think again. This collaborative approach was observed throughout the consultations, with the pharmacists consulting their formularies (the British National Formulary – an authoritative reference guide on medicine use) if they were unsure of how to answer a particular question. In general the patients seemed to accept the pharmacists' advice albeit after some discussion.
- (vi) In general it was felt that patients said all they had come to say and the pharmacists all ensured this by asking the patients if there was anything else they would like to ask. However, an elderly gentleman provided the pharmacist in one consultation with a dilemma. The patient was hypertensive and his medication was being reviewed. He knew the pharmacist well and this was a repeat visit. The patient told the pharmacist that he was not getting much sleep because his wife was unwell and cried out during the night, He made reference to his wife on two more occasions and would then say 'but it's OK I can cope'. After the consultation the pharmacist said he had realised that there might be a problem with the patient's wife but was unsure how to proceed as she was not under his care. The dilemma he faced was should he look in the wife's medical record (to which he had computer access) to ascertain which GP was responsible for her, or would this be breaching the rules of confidentiality. This raises a question as to whether training in supplementary prescribing should include training in ethical dilemmas not likely to have been encountered in 'regular' pharmacy practice. Other issues noted during the observations were whether a SP needed to know when to call upon the services of a district nurse or social worker – tasks commonly encountered in routine general practice. These are elements of the job which were possibly not anticipated when developing supplementary prescribing for pharmacists.
- (vii) During the phase 1 interviews some participants had reported problems closing patient consultations and so the observers paid particular notice to this aspect of the consultations. Each pharmacist adopted a similar approach asking the patients if there was anything else they would like to ask and arranging a further

appointment if necessary. At this point most patients made ready to leave and there appeared to be no problems with this amongst the consultations we observed.

- (viii) After each consultation the pharmacists made a note of the content of the consultation in the patients' notes.

Observations within the Secondary Care Setting

The three patient consultations observed in this setting all concerned the counselling of patients about their treatment, prior to discharge. All three were seen on the wards.

- (ix) The pharmacist had been doing this type of counselling for 8 years and thus was extremely confident and relaxed with the patients. She introduced herself to each patient and explained why she was there, then sat on either the bed or next to the bed to talk to them. Prior to going to the bedside, the pharmacist had read the patients notes to learn about their history. The first patient was terminally ill and after discussing his treatment with the pharmacist he asked her to return during visiting hours to speak to his wife, to ensure that she understood the treatment too. The pharmacist did this later in the day when she spent a considerable amount of time talking to the patient and his family. She showed great sensitivity in this situation and did not at any time appear rushed, even though she had a high workload.
- (x) Another patient had had the medication (which the pharmacist was responsible for) on a previous occasion in a different part of the country. He said that he had not been given such clear information before and found his talk with the pharmacist very useful, particularly the fact that he could telephone her personally if he had any queries about his medication.

Following the observation of the consultations the interviewer discussed them with each participant to hear how they felt about them.

Pharmacists' Experiences

One participant began by talking about the closure of the consultations saying she had tried not to make the patients feel as if they were being rushed out of the room. On the other hand, she said she needed to make it clear to them either by words or body language (e.g. standing up), that the consultation was over. This pharmacist had not been impressed by some of the patient/doctor consultations she had observed during her training and felt the closure could be better managed she said, *'I mean some GP's would notice that they needed to get the patient out so they would either just turn to the computer and disconnect the eye-contact or they might stand up and say 'got to go now' or words to that effect. There was no wind-down.* (Pharmacist CS 3)

Another participant had conducted a consultation with a patient who suffered from a variety of complicated conditions but was seeing the pharmacist for a medication review for chronic obstructive pulmonary disease (COPD). She was asked whether she felt confident about her clinical examination skills, given that the patient had presented her with a number of health problems. She replied, *'I think I would perhaps like some training but then if you're not happy refer them back to their independent prescriber, so I think I'm happy in terms of my C.O.P.D. remit.* (Pharmacist CS 5). Another participant had experienced difficulties putting on a sphygmomanometer cuff in a way that did not cause discomfort to one of his patients. He suggested that appropriate use should be included in pharmacists' training as it could make a significant difference to the comfort of the patient.

Participants were asked whether they had adopted a particular style for their consultations and if so whether they had based this on a particular role model (e.g. their DMP). Most said they had developed their own style but had tended to copy some of the skills demonstrated by their DMP. One participant said that pharmacists already had a style of their own, *'it's a pharmacist's style....an over the counter style of asking questions and getting the immediate relationship with somebody you don't know straight off.* (Pharmacist CS 3)

Most of the observations of patient consultations were made during busy clinics and participants were asked how they managed their time. One participant who carried out his consultations in his own community pharmacy said:

The time management is an interesting issue in that you can do this sort of stuff [patient consultations] while you are running a dispensary..... but you have to be able to manage the flow of patients or release enough time to spend fifteen minutes, twenty minutes with a patient which we have managed to do here partly by shifting the dispensing to the other pharmacy. (Pharmacist CS 2)

Participants were asked if they had any other thoughts about their consultations and one said she had quite a collaborative approach to patient care:

I think they're more honest with the pharmacist and they're more questioning, I suppose they've got permission to question and I actually encourage that. It's quite funny because some of the more elderly patients, when I say 'I think we ought to put the blood pressure tablets up' and 'these are the side-effects and this is what it can do to you, are you happy' and they'll say 'you're the expert' so they are quite taken back that they have the choice. (Pharmacist CS 3)

The same participant spoke of how she tended to use her intuition when she feels the patients may have more to say:

I tend to go by intuition because sometimes I feel there is something the patient is not happy about so I use that more as a prompt. So I double check that they're happy with the plan that I've giving them or if they're just digesting information, which could come across as if they are not quite with you at that moment in time then that's fine at least they've got the opportunity to ask. (Pharmacist CS 3)

A participant who had only been prescribing for a short time talked about the consultation which had just been observed:

The last one I found quite a difficult patient in terms of she didn't really want to listen but with the guy I thought at first he was going to be quite difficult but I think he was actually quite receptive in the end. It was quite a long consultation His actually went well - I felt as if I perhaps might get somewhere with him... (Pharmacist CS 5)

This pharmacist demonstrated the reflective practice skills she had learned during her supplementary prescribing training by questioning whether she could have done things differently, saying of a patient, *'Perhaps I would have tried to have had directed a little bit more and probably been a bit firm with her cause I let her waffle on a bit too much'.* (Pharmacist CS 5). She also expressed concern that she might have missed

something about the patients during the consultations, especially as she was only at the GP practice for one session a week:

What I find hard is the fact that by the time I leave this session I want to be happy in my mind that I've followed them all up with the GPs or at least made a practice note to them saying 'can you do this with this patient?' If I haven't then I do get concerned because suddenly other things happen between going back the following week, so that concerns me a little bit. (Pharmacist CS 5)

Finally, this participant spoke of how she had not yet had time to build up relationships with the patients but was already getting requests for repeat visits. She was very pleased about this, saying,

I guess I haven't that chance to build up that relationship with patients yet. In terms of just chatting I think that's ok but building up my trust to get them in - I don't know whether that's working yet. I've had the odd patient come back and say 'great I'll always come and see you' sort of thing which is quite nice to hear but in a way really it shouldn't matter who they see. (Pharmacist CS 5)

6.4.7 The Clinical Management Plan (CMP) in Practice

The implementation and use of clinical management plans varied from setting to setting, how did these compare in practice?

Pharmacists' Experiences

One of the themes which emerged was that pharmacists are becoming increasingly frustrated with the need to write clinical management plans for every patient and agreeing them with their independent prescriber. As discussed in Phase 1 (section 5.4.3) the CMP, in some cases, was felt to be a hindrance to providing effective and timely patient care. An independent community pharmacist with a pharmacy attached to a GP practice talked of the continuing problems of CMPs. This respondent provides a picture of what is actually happening in reality:

Supplementary prescribing is complicated because it is designed around disease management clinics so it's very much focused on a particular disease. Writing the clinical management plans to be broad enough is very, very difficult, so if you come across a problem left of stage it's not easy to deal with it. Whereas my take on independent prescribing is that if someone had a particular problem and you felt comfortable dealing with it you could. Whereas at the moment there are hoops to jump through which are artificial in a wayeven taking simple examples like someone has a sore knee when they come in and see you like that chap yesterday, supplementary prescribing doesn't work for that sort of problem easily, because you'll not find many clinical management plans for sore knees that are as simple as prescribing paracetamol. The frustration is that I could have walked out and sold him some paracetamol with no problem. (Pharmacist CS 2)

The theme 'frustration' came up again in discussions with a primary care pharmacist who had only recently begun to prescribe, '*I do get a bit frustrated if I can't work outside the plan*'. (Pharmacist CS 5). This participant explained why this was the case with reference to a patient who had a number of conditions, some of which were outside the CMP. This pharmacist felt she was competent and confident of prescribing

for all of these co-morbidities but had referred the patient back to her GP. She also highlighted the important issue of looking at the patient as a whole, rather than just with one or two conditions, 'You do have to then think of the bigger picture what else is wrong with them and you can't just focus on that one area'.(Pharmacist CS 5)

Pharmacists said that if they were allowed to become independent prescribers, this would mean that CMPs were no longer needed. However, most agreed that there would always be the need to work to some form of locally agreed protocols, as one participant said:

Most areas have got a sort of protocol in place of how a patient should be treated and there is a template that you work within as well. There are guidelines for management in most areas so I'd like to think that we would work within local guidelines rather than having to be that rigid with a plan. As long as you know what you're working within, but yes I think there should be some structure. (Pharmacist CS 5)

An area of concern which arose from the phase 1 interviews was that pharmacists working in the hospital setting did not appear to be working within agreed CMPs. Indeed, some felt that because they had protocols which were agreed by the hospital trust there was no need for CMPs. One participant described how this worked in her hospital:

I think we work to a proforma which is very much a clinical management plan, in that if a person presents with a deep vein thrombosis we know what the INRs will be, we know how we would treat them and we know what the monitoring and everything is. If they are on other medication we balance the monitoring and dosing which are all the things that you would have in your clinical management plan. (Pharmacist CS 4)

When asked whether the prescribing for patients was actually agreed beforehand with the independent prescriber, it was clear that this agreement was very broad:

...but we don't have a written one each time, we have a referral of the patient to us by a doctor each time and we need to actually begin to do clinical management plans and we are quite conscious of that.... (Pharmacist CS 4)

It was evident that within the hospital setting the issue of CMPs is yet to be satisfactorily resolved. In the case above, although the consultant specialist is her independent prescriber, he does not do the initial prescribing for all patients who require this particular medication. The majority of this is done by junior doctors working for a variety of consultants making it difficult to determine who would be the independent prescriber and with whom the CMP would be agreed.

Whilst the majority of participants said they felt competent to prescribe within a wider remit, this does lead to some further problems of diagnosis and clinical governance which are highlighted by doctors in section 6.4.12.

Independent Prescribers' (IPs') Experiences

In the primary care setting, the IPs interviewed appeared to have a good understanding of the concept of the clinical management plan, its purpose and the legal requirements for it. In the hospital setting there was an entirely different picture. When asked about his thoughts on the CMP and its application in the hospital setting, one consultant IP said 'I'm not sure what you mean by that' (IP CS 1). The interviewer

then gave a description of the CMP and when the IP was told that it was a legal requirement of supplementary prescribing he replied '*Right, I'm not sure whether I know that.*'

During one hospital case study, the researcher had the opportunity to interview a senior pharmacist who had been involved with the implementation of supplementary prescribing in his trust, for both pharmacists and nurses. He demonstrated a clear understanding of the legal requirement for CMPs. Nevertheless, his pharmacy prescribers were still not using them:

The two problems I suppose with clinical management plans are that they are very time consuming to write. Also there is a problem making sure that you have the technology to update them. The thought of having to write everybody's CMPs by hand is a problem. At the moment, of course, from a governance point of view, we say a fundamental part of being a supplementary prescriber is that you have CMPs in place. (Senior Pharmacist CS 4)

When asked whether the hospital doctors received any training or support in how to be a DMP or independent prescriber he replied that they did not but it would be useful.

Patients' Experiences

None of the patients interviewed had ever heard of a clinical management plan. The patients in the general practice setting were then asked how they had been referred to the pharmacist and none could remember having discussed this with their doctor. This process is described by one patient:

No, I got a form from the dispensary telling me that they'd like me to call inoh no it did come from the doctor - that they would like me to call in and see the dispenser..... The doctor made an appointment for me and I had to contact the surgery if it wasn't suitable for me. (Patient CS 2)

Umm I can't remember whether he did or not, he is very good and I like him a lot. (Patient CS 3)

None of the patients had been formally asked by their doctor to agree to be seen by the pharmacist, either verbally or in writing. They were asked whether they had any objections to seeing the pharmacist rather than the doctor. Here is an example of one exchange with a patient from case study 2:

Interviewer: *And you don't have any objection to seeing the pharmacist it was ok with you?*

Patient: *Yes*

Interviewer: *Were you asked to agree to anything or sign anything?*

Patient: *No.*

Interviewer: *You were just referred?*

Patient: *Just told to come in.*

Interviewer: *And you were happy about that?*

Patient: *Yes.*

However, some patients expressed some surprise that they were being asked to see a pharmacist and were concerned at first, as the following extract shows. This patient had come in to the surgery to make an appointment for a medicines review and was told that her appointment would be with the pharmacist:

Yes that was it and that was how I came to see [the pharmacist] the appointment was made and I was a bit taken aback because I thought it would have been better for me to see the doctor but everything that was necessary was done through xxx. (Patient CS 3)

In the hospital setting the patient/pharmacist interactions we observed were all on the ward setting and it appeared that no agreement had been made with the patient for the pharmacist to take part in their care. As reported in section 6.4.6, the patients did not question this process.

6.4.8 Clinical Governance in Practice

A number of other clinical governance concerns arose during Phase 1 including, pharmacist's level of access to patients' notes and the confidentiality issues which arise from this. We also examined what awareness there was, on the part of all health care professionals involved in the SP process, of the increased accountability and responsibility of the new role.

Pharmacists' Experiences

The results of the phase 1 analysis showed that participants believed that full access to patients' medical records was essential to their practice as supplementary prescribers (see section 5.4.3). This was reiterated during a case study with a pharmacist working in a GP practice where she talked about what she saw as the potential problems of access within the community pharmacy setting:

I think [access to] patient records under the NHS programme for IT is key in supporting independent prescribing and supplementary prescribing outside of the GP setting. Until you've got full records it's quite difficult to do effective prescribing without the full story... (Pharmacist CS 3)

All agreed that pharmacists' access to medical notes is essential to prescribing. However, there were mixed views on whether and how patients should give their permission for pharmacists and other health care professionals to have access to their records. Some felt that permission was inferred by the patients because all general practice staff were bound by the same rules of confidentiality. We examined this issue further with the other groups of participants in the case studies.

Patients' Experiences

As stated in section 6.4.6, some of the interviews with patients were difficult to conduct for a number of reasons. The relationship between the patient and his/her medical advisor is based on trust and we were mindful of not asking questions which might compromise the delicate balance of that relationship if, for example, the patient had not been previously aware that the pharmacist had access to their notes. Those patients who were asked had no objections and one said, '*I can't think of any reason why I should*'. (Patient 3, CS 2)

Independent Prescribers' (IPs') Experiences

We asked IPs what provision they had for obtaining patients' consent for the pharmacists to have access to their notes. None of the IPs had a formal system in place and indeed, said that they had never broached the subject with a patient. One GP said:

The issue of telling people that the person they are going to see does have full access to their records – I hadn't thought of that. It makes you

wonder what people would think if they realised they were seeing somebody who is going to prescribe for them without having full knowledge of their history. Difficult one! (IP CS 2)

This GP went on to say that the issue probably needed addressing but that he was concerned that telling people that someone else has access to their notes might '*frighten some people away from seeing [the pharmacist] or other people in his situation*'. The pharmacist in this setting worked in a separate area of the building, in a pharmacy where he had a consulting room. He had access to patients records through the practice computer system and although this was password protected, on the subject of confidentiality the GP said, '*I am less concerned about [the pharmacist] than the fact that there is a computer terminal there and there are other people working where he is – he should be the only one who's able to access the information*'. (IP CS 2)

Other Health Care Professionals' Experiences

Other health care professionals including doctors and nurses were asked their views on the pharmacist having access to patients' records and one GP highlighted the dangers of **not** having access

If the pharmacist doesn't know what medication people are on or what medical problems they have it's going to be the same for us out of hours. You're confronted with a patient that you don't know and what their past medical history is and what their medication is. So when you take a decision to prescribe you may actually prescribe the wrong type of medication because you're not having the full information. So I think it could be dangerous if a pharmacist who's part of the care for that patient is not entitled to see that patient's record. If a pharmacist is a supplementary prescriber and is taking care of that patient then he or she should have full-access to the notes. (GP CS 3)

The nurses interviewed all said it was essential that pharmacists and other prescribing health care professionals had access to patient notes and confidentiality did not appear to be an issue. All of the health care professionals seemed surprised that the question was asked.

Administrative Staff Experiences

The administrative staff gave a considerable amount of thought to the access to patient records and confidentiality. One participant said:

I think they should know that the pharmacist is going to have access to all their records and I think that it is important that the pharmacist does [have access] otherwise they can't make an informed decision about the medication (Administrator CS 2)

When asked who should obtain the consent of the patient she replied '*I think possibly the doctors should tell the patient but they might already, I don't know*'.

Within the NHS, staff who have access to patients' care records are bound by a code of confidentiality and access to those records which are electronically held is usually password or 'Smart Card' protected. Guidance on patients' care records which are maintained electronically is given in the NHS 'Care Records Guarantee'. This guarantee allows patients to control whether information in electronic medical records made about them by the organisation providing their care, can be seen elsewhere in the NHS. The paper sets out the proposals for giving greater control to patients about

who will be able to use records about their care. This has implications for supplementary prescribing within community pharmacies where pharmacists are not directly employed by the NHS but will be unable to prescribe without full details about patients' health.

6.4.9 Responsibility and Accountability

The team approach to patient care, whilst it may have benefits for patients, raises the issues of accountability and responsibility in terms of who should take overall responsibility for the care of the patient and who is accountable when something goes wrong. With doctors devolving more and more patient care to pharmacists, nurses and other health care professionals there is a possibility that they may become more remote from those patients. Without effective communication amongst team members there is a real potential for patient care to be compromised.

Pharmacists' Experiences

During the course of one hospital case study the pharmacist was in a situation where she was sharing the care of the patient with doctors working in the primary care sector (see section 6.4.5). She expressed concern because, once the patient was discharged home, she no longer had access to the medical records and, if she needed advice, she often found it difficult to contact the GP responsible for that patient. Although the pharmacist was adjusting medication doses for patients in the community she was not working under the guidance of the GP who should, technically, be her independent prescriber for that patient:

It is a debate that is currently on-going with the GP's because we have a shared care guideline which clearly says it is the responsibility of the GP's to actually prescribe the drugs, we are responsible for changing the doses, and it is their responsibility to stop the drugs at the end of the course of treatment. (Pharmacist CS 4)

Should these drugs be continued unnecessarily, there was a risk to patients' health due to the unnecessary continuance of treatment.

Another hospital pharmacist talked of using his personal judgement when prescribing, thereby acknowledging that the responsibility for prescribing the correct medicine and dosage was his. In the following extract he describes the difference between adjusting the dose of a medicine once the initial dose has been prescribed by a doctor, and making the [initial] prescribing decision himself:

I have looked at prescriptions and made a judgment and thought that's appropriate or that's inappropriate. There is a big, big difference between responding to what somebody else has decided as more appropriate treatment and to make a judgment based on your interpretation of that prescription. It is completely different to be faced with almost a blank canvas in terms of what do you want to do, or how you want to manage this [patient]? You have got a range of options within your clinical management plan, but which one do you go for and how do you justify that? That's a different kind of analysis and a different kind of mind set [to] Doctor X has written that up, is that appropriate? (Pharmacist CS 1)

A pharmacist working in a GP practice who had recently begun prescribing talked of the responsibility of only prescribing if she felt competent to do so. She realised that, in the patient's best interest, she should and would refer back to the doctor and this

was a view expressed by all pharmacists in the primary care setting, regardless of how long they had been prescribing:

I think new SP's must realise that they don't know everything. If they're not 100% sure then they must always ask and check it out no matter how embarrassing it might feel, you need to [do this] in the patient's interest. (Pharmacist CS 5)

Nurses' Experiences

Working within your own professional competence, and with the patient's best interest at the heart, was similarly echoed by the nurse participants. One nurse working in a hospital setting said:

Anybody who takes on the prescribing role should have both the knowledge the skills and the responsibility to use that within their specific remit. (Nurse CS 1)

The other nurse, who had significant experience as a supplementary prescriber, said that issues of responsibility and accountability applied to all health care professionals, not just pharmacists. She also suggested that it was necessary to find an appropriate way to 'regulate and assess peoples' competence' (Nurse CS 5).

Independent Prescribers' (IPs') Experiences

The lines of accountability and responsibility seemed to be much clearer in primary care than in the hospital. This may be because the role of the IP is clearer, with fewer medical staff involved in the care of the patient. The GP IPs have taken on this role as a partnership with the pharmacists, who in most cases they have known for many years. Usually, the GPs were referring patients to the pharmacist who they felt were suitable for supplementary prescribing. In the hospital setting, patients with specific conditions could have more than one doctor making lines of responsibility unclear. One GP IP talked of his responsibility:

I think if there is a mishap with a patient I would assume that I carry the can in that I am supervising [the pharmacist]..... I don't think he would prescribe without coming back to me ... people are only going to be treated according to protocol. (IP CS 2)

The IP to the pharmacist running the medication clinic (CS 4) expressed similar concerns to the pharmacist about the problems that can arise when patients' care is shared between the hospital and the GP. He referred particularly to the lack of communication:

Communication is always a problem and we have some 2000 patients who are anti-coagulated now, so it's a huge number of patients, a huge risk. We discover patients from time to time who have been on [this particular medication] which should have been stopped so that process needs to be tightened up 'some people [doctors] may feel that it isn't their responsibility anymore, to be concerned, and we mustn't have that otherwise its just going to make the whole process unravel a bit more'. (IP CS 4)

He went on to say that one of the inevitabilities of doctors becoming 'more precious and more specialised is that we have to spread the load and responsibilities'. (IP CS 4)

6.4.10 Effects of Supplementary Prescribing on Doctors

One of the potential benefits of supplementary prescribing as outlined by the Department of Health was that it was likely to reduce doctors' workload, freeing up their time to concentrate on patients with more complicated conditions and complex treatments. Is this happening in practice?

The potential for pharmacist to affect doctors' workload was clearer in the general practice setting. Increasingly, pharmacists are taking over a variety of clinics from the GPs:

We are seeing less routine cases, it took a long time to get it right though. Patients would sometimes have had a medication review with [the pharmacist] and yet they'd still come and have one with us two or three weeks later, because they felt we needed to do it as well.... in the early months there was actually duplication because the patients didn't seem to grasp that they (the pharmacist) actually replaced the annual check with the doctor. (IP CS 3)

When asked whether this GP felt her workload had changed she replied 'you feel it must have done but it hasn't really been noticeable'.

Another GP said that it was too early to tell whether supplementary prescribing by pharmacists had freed up their time to enable them to see more complicated cases. This she said was because the culture of health care had changed significantly over recent years and patients were still in the process of being educated into these new practices:

if you can educate patients - and patients that have used the different services - that have seen a nurse practitioner, they've seen the pharmacist - then they may say 'actually, I had a very good service and I don't need to see the doctor' but we're stuck in a culture and the culture is that if you have a problem you see the doctor, the doctor will do the prescription and then you take it to the chemist. This culture has always been like that but now we're getting more lateral because out of hours you've got paramedics and nurses as well and I think it's a culture shock for people to say actually 'I don't want to have to see the doctor for these so I've got this problem and the problem may be better seen by another healthcare professional'so I think it's all to do with the change of culture and educating people. (GP CS 3)

It became increasingly clear throughout the case studies that patient education and the provision of adequate information were extremely important as changes were made to the health care process. For patients to make an informed decision about who they see for their health care, they need to completely understand the implications.

Only one of the doctors could say definitively that the change in practice to supplementary prescribing had changed his work experience. This was the hospital consultant working with the pharmacist who had taken over his specialist medication clinic:

I was completely overwhelmed with the process of [medication monitoring and] control as a single-handed consultant at that stage. It was two hours of work most afternoons just dosing [this medication] without the opportunity to explore what was really going on with these

patients ... it's transformed my life. It doesn't mean that I'm less busy because other things have taken over. (IP CS 4)

All doctors were asked whether they had kept any records of the change in workload and types of cases seen since the pharmacist began prescribing. None had done so making it unsurprising that they were unable to tell us whether there had actually been changes.

6.4.11 Benefits to Patient Care

One of the benefits of supplementary prescribing was to provide patients with quicker and more efficient access to medicines and to make the best use of the skills of trained pharmacists, nurses and midwives. Was this the case in practice?

Doctors' Experiences

All doctors interviewed agreed that pharmacists were the best people to provide medicines advice to patients and that supplementary prescribing had enabled patients to receive health care advice from the relevant professional. As one hospital consultant said:

Since the pharmacy took over the day-to-day control of [medication monitoring and] there has been an improvement in the information that patients are getting and some areas where risk has been diminished'. (Doctor CS 4)

Practice Nurses' Experiences

The practice nurses interviewed also expressed the view that pharmacists were the most appropriate people to provide medicines advice. They said that as a result, patients were receiving better quality care:

Oh I think it's a great thing for patients because I think she spends a lot of time explaining what supplementary prescribing means to them and I think that's good. She explains how the medication works which I don't think doctors particularly do unless asked and I think she's giving them better quality prescribing. (Practice Nurse CS 3)

Administrative Staff Experiences

The two administrative staff both said that the introduction of a prescribing pharmacist into the practice provided the patients with better medicines advice because the pharmacists were able to give them much more time than the doctors. One said:

We struggle for appointments all the time and the doctors get them in and rush them out again. At least the pharmacist allows about half an hour to sit and talk to the patients, to check through their medication and to make sure they understand (Administrator CS 2)

Pharmacists' Experiences

All of the pharmacists interviewed said that one of the reasons they undertook training in supplementary prescribing was because they believed they could enhance the health care given to patients. When describing the benefits of a pharmacist consultation, respondents tended to implicitly compare the benefits of a pharmacist to consultations provided by a medical colleague. Some of the benefits to patients they spoke of were improved advice about medicines, more appropriate and timelier access to health care advice and the facility to give the patients more time. During phase 2 we explored these issues and participants reported that the most important

benefit to patients was choice: patients had more options for seeing someone about their health problems:

they can access a number of health professionals that are able to give them advice on medicines easily and gives them the option whether they want to choose to see a GP or choose to see a pharmacist for whatever they want to discuss. So that's a benefit for the patient. (Pharmacist CS 3)

Not surprisingly, pharmacists believed that they were the best people to provide advice about medicines and to prescribe appropriately. They believed that supplementary prescribing provided patients with quicker and more efficient access to medicines, and that patients were less likely to come to harm. One hospital pharmacist said, '*The benefits are patients are less likely to be poisoned or harmed from medicines if they are managed and prescribed by somebody that has the skill set and knowledge to understand the implications of introducing and managing that drug therapy*'. (Pharmacist CS 1)

Pharmacists also said they believed that patients wanted to understand more about their medicines but historically doctors had not had the time to provide them with information:

I think they do want to know because some of the older generation do. They're pleasantly surprised when you enlighten them as to their medication... [they] don't really feel it's their place to ask especially the older generation so I tend to tell them anyway and a lot of them go out and say 'that was really useful because I now know why I take my tablets in the morning. I now know why I have to take them at night' I think it just helps a lot really that they understand what to do and why they're doing it. (Pharmacist CS 3)

One hospital pharmacist, however, made a sobering comment which warns against pharmacists becoming over-enthusiastic about their new role without discussing it with the patient:

Surely the patient comes into this somewhere but its almost like they are the side issue and not really that important, its kind of 'oh well a pharmacist can do that and we can [do it] better and we are so good and this is the way it should be' and you think well has anybody asked the patient what they want? (Pharmacist CS 1)

Patients' Experiences

In general it was hard for patients to see the benefits to themselves of being cared for by a pharmacist. Most commented that it was a good thing because doctors were busy and this would reduce their workload. One patient talked of this and said she would still prefer to see her GP for some health problems:

I think it's a very good idea. It relieves the doctors of all their pressure. Particularly in this area where there are so many elderly people and I think it's a very good thing and it would depend on really what you were suffering from. There are some things you wouldn't want to go into a pharmacist for but on the whole I should think I would accept it. (Patient CS 2)

This was echoed by another gentleman who was accompanying an autistic son. This was the first time he had met the pharmacist and said that until he got to know and trust her better he would still want to take his son to the GP, he said, 'X's metformin is on the limit. He takes 6 a day now. If he was to switch to insulin I'd prefer that to be done through the doctor.' (Patient CS 3)

Another patient thought that it might be easier to get an appointment with a pharmacist rather than a doctor saying, 'you could maybe see a pharmacist the same day because you usually have to wait 2/3 days before you see the doctor'. (Patient CS 2). Patients were also asked if they found it easier to understand their medication after they had spoken to the pharmacist. All agreed that they had been given more information than their doctor would give, and that the pharmacist gave them more time and seemed to listen to what they had to say. One said, 'They come to your level and they can explain things... so you go away much happier.' (Patient CS 3). This patient was very happy with the care he had received and commented on the fact that the pharmacist had referred him back to his GP because he had told her of a new health problem:

I've been under Dr x all the time but when I came in 3 wks ago, I saw [the pharmacist] then and I found her very helpful. She listened to me and gave me some more tablets. I get indigestion or something - well I pass a bit of blood in my water sometimes. So she referred me back to the doctor now which is the right thing to do and I would be very happy for her to treat me all the time really. She listens and understands more than some of the doctors do in here. (Patient CS 3)

Another patient explained after speaking to the pharmacist she had a better understanding of her hypertension medication and would go back to her for advice:

She explained to me why I was on blood pressure tablets. I knew I was on them because my blood pressure was high but she did explain things very carefully and yes I did have quite a good understanding and I feel that if I needed to ask her anything again I could do so. (Patient CS 3)

A patient in the community who had been cared for by a hospital pharmacist for some years described how close the relationship had become. She explained that she never went to see her GP about her medication dosing because she felt that the pharmacist had a greater knowledge of medicines and also understood her individual case better. This extract shows the level of dependency that had developed:

I get worried if [the pharmacist] is on holiday and there is a team change in the lab. Because I'm really sensitive to drug X. They will tell me to take a higher dose than I need. So it's difficult telling them 'no I can't take that dose'. Whereas, [the pharmacist] understands. (Patient CS 4)

In fact, this patient was so dependent on the pharmacist for advice that when she went on holiday she took a laptop computer with her so that she could access the pharmacist's advice from anywhere in the world.

However, this patient talked of her fears when the pharmacist first took over the dosing of her medication. She said that no-one had discussed this with her and she had simply been told that this would be the procedure in the future:

When they first took over care I would sit waiting for a call which was very stressful. I would think why isn't a doctor dealing with me – having had so many people looking after me for such a long time I felt sort of abandoned. I thought do they know about me and my history – do they really understand what's going on. I was very scared. (Patient, CS 4)

This extract indicates that if her health care team had taken the time to explain to her what would be happening and why, the patient would have had a better understanding and her feelings of stress and isolation might have been avoided.

6.4.12 Future Pharmacy Practice

Participants expressed a desire to have greater responsibility for those areas of the doctors' role about which they felt they had greater knowledge – being able to prescribe correctly for medical conditions. How did the pharmacists' colleagues feel about the future of pharmacy practice?

The Views of Independent Prescribers (IPs)

All IPs interviewed said they believed that the pharmacist had a greater knowledge of drugs than they did and were in no doubt that pharmacists should be using those skills to help ensure that patients' medication is correctly prescribed. One hospital consultant expressed the view that:

They are the experts and it seems logical to me that they should have the prescribing power and the accountability as well. (IP CS 4)

However, when discussing the possibility that pharmacists might take on the extra responsibility involved with independent prescribing they were more cautious:

The difficult bit is not the prescribing but the diagnostics.....the pharmacists have been well trained in terms of understanding the drug and its side effects, and compliance and there they are as good as a doctor, if not better. What they haven't been trained to do is make diagnoses and I think that is the tricky bit. (IP CS 3, GP)

Another GP also expressed concern about the issue of diagnosis saying '*I have got sufficient experience that I can review patients' notes....I think that provided the criteria are laid down I don't see why people like [the pharmacist] shouldn't take on more and more*'. (IP CS 2)

The perception of the IPs seemed to be that there needed to be very clear guidelines before they would consider extending the pharmacists' role. One hospital consultant talked of the complications involved in running medication clinics and said that '*the current system [supplementary prescribing] needs to be tightened up before we add another complication*' (IP CS 4).

There was also concern expressed by one IP that '*some people are over confident and might go beyond their levels of competence and that's what I'd been slightly anxious about*'. (IP CS 3)

From these comments it would seem that whilst IPs have welcomed the extension of the pharmacist's role to supplementary prescribing, they have some reservations about independent prescribing. This is not because they do not have confidence in pharmacists' knowledge of drugs and prescribing, but because they feel that there are a number of issues which would need to be addressed such as diagnosis and criteria

for patient care, before independent prescribing by pharmacists would be acceptable to them.

The Views of Other Health Care Professionals

One GP talked at length of her concerns about the extension of the pharmacist's role:

The only problem that I've got with that is that there has to be a good clinical basis for prescribing and so if there is a structure that a pharmacist could work with a doctor specialist where there is a good clinical base that the diagnosis has been made or diagnosis had been suggested then I don't have a problem pharmacists prescribing they're [pharmacists] perfectly capable of starting medication, changing medication, titrating up, titrating down and I don't have problem with that at all. The only problem I do have is if a patient comes with a new problem there is a clinical base to making a diagnosis (GP CS 3)

The same GP said that the solution was to have a clear definition of the role of the doctor and the pharmacist where the doctor made a diagnosis and the pharmacist prescribed for the patient's condition.

The doctor is there to assess and make diagnosis, do tests and what have you and once a diagnosis is made a pharmacist can prescribe and be part of the treatmentso it should be cooperation between the two. (GP CS 3)

This GP also talked about the role of pharmacists in the community, and how she felt about supplementary prescribing in that setting. She again highlighted the issue of diagnosis:

I mean for minor ailments they're already doing that but I still feel that supplementary prescribing should be part of the whole clinical picture in which the pharmacist shouldn't really prescribe anything that they can't underpin with sound clinical history taking, physical examination, I still feel that should be doctor's role.

When asked how she would feel about pharmacists expanding their prescribing role a practice nurse indicated that this would be a positive move towards improved patient care:

I think it would be fantastic because it's someone else who is able to prescribe apart from the doctors she's a bit more accessible and I think probably she's not seeing patients all day so you can go and tap into her knowledge and expertise If she's going to be an independent prescriber we can say [to patients] 'I'll go and get the pharmacist to have a look at this and see what she thinks and whether she thinks you should have some antibiotics so I think it will be a great asset. (Nurse CS 3)

However, a hospital nurse practitioner, like the doctor above, expressed concern about pharmacists' abilities to diagnose and become independent prescribers.

I find a little bit difficult to grasp how you could become an independent prescriber without being able to make the diagnosis. (Nurse CS 1)

This view was echoed by another practice nurse who was both a supplementary and independent prescriber but she did say that her concerns applied equally to nurse

prescribers, where nurses' knowledge of medication may not be sufficient to the task, *'the worries about pharmacists are the same as the worries about nurses in a way, the worries about pharmacists are whether they have the clinical skills'* (Nurse CS 5)

The Views of Administrative Staff

It was only possible to interview two administrative staff during this phase, and both worked in general practice. They were positive about the contribution the pharmacist had made to the practice both in terms of medication advice and the fact that the pharmacist was another person to whom patients could go for health care advice. One was very keen to see pharmacists become independent prescribers as her narrative illustrates:

Wonderful, great, it's another string to your bow. It's another direction you can send patients in. That's what we're all about on reception – making sure that the patient sees the correct person. The more choice you can offer them, the more patient satisfaction you get because they will then be seen quicker and they'll be happier because they are being seen more promptly and they're getting a better service. (Administrator CS 3)

6.5 Diary Study

Breakwell and Wood (1995) describe diary techniques as *'any data collection strategy which entails getting respondents to provide information linked to a temporal framework The record of information in relation to the passage of time is referred to as a diary'* (p. 293). The purpose of a diary study is to help researchers understand the actions, thoughts and feelings of a participant over a period of time. This may be a day, a month or even several years and although such accounts are by nature unique to individuals, they may help others to gain an insight to the physical and social processes involved in a particular area of research. Here, we used the diary study approach to obtain data concerning one pharmacist's experiences of becoming a supplementary prescriber. What follows is a diary of events and feelings of the participant whom we have given the pseudonym 'Ray' both to preserve his anonymity and to emphasise the personal nature of the account. The diary was agreed with Ray, before its inclusion in this report.

Ray was first interviewed on 20th June 2005 as part of phase 1 of the research. At that time he had been a community pharmacist for 6 years, having previously spent 15 years as a hospital pharmacist and 4 years working for a clinical trials company. Ray talked of the differences between his previous work as a pharmacist and his current role and said that the biggest difference was in his relationships with patients. Whereas in hospital pharmacy these relationships had been of short duration, in the community they were longer term:

There is one lad who was just a bump when I got here and he's now gone to school. So I use him as a marker to see how long I've been here, because he is one of the first ones I remember. If anything should happen to him, all of a sudden it becomes much more important, in a hospital you don't really develop enough of a relationship to be an issue ... here you do.

Throughout this first interview Ray referred to significant events which had taken place during his transition from a secondary to a primary care setting. Ray had talked of the difficulties he had faced and had yet to overcome in his attempts to become a supplementary prescriber and so he agreed to keep a note of events over a period of 3 months, until September 2005, when we would return to talk about his experiences. The diary begins in 2002 with data collected from the first interview.

Date	Event
April 2002	<i>I was approached by the PCT to be a pilot site for the for the medicines management programme. They would install a computerised link with the surgery so that I could do repeat prescriptions and medicines reviews. I was chosen because we have a very convenient pharmacy/doctor relationship. There is only one GP practice and only one pharmacy and probably 90% of their work comes to me.</i>
Nov 2002	<i>Computer system installed after about 6 months of telephoning BT and the PCT IT support people. No-one seemed to be interested in helping because they say that community pharmacy is not part of the NHS.</i>
Jan 2003	<i>GPs began to obtain consent from all of their patients for me to have access to their medical records. There are three levels of access – 1. Full access 2. Restricted access. 3. No access. Those who do not give full access cannot get their repeat prescriptions from me.</i>
April 2003	<i>The majority of the consents from patients have now been obtained and only a small minority have agreed to restricted access or have said 'no' to any access. One or two patients were concerned that their medical information would 'get around town' and some have questioned why a pharmacist would want this information. We have explained to everyone how our systems work and how their confidentiality will be maintained but it's a small town and a lot of gossip goes on. Some patients will meet in the pharmacy and talk about somebody they mutually know who is unwell. We haven't given them any extra information – it's just chat that goes on and is hard to stop. As long as none of the pharmacy staff adds to the conversation it's OK.</i>
June 2003	<i>Made aware by the PCT medicines management group that it was possible to train in supplementary prescribing. Thought it would be a good idea as I already had the links with the GP practice.</i>
May 2004	<i>Attended a meeting to promote supplementary prescribing training by pharmacists. There were 150 – 200 people present and at that it was basically said that everyone's going to have to do this eventually and it was implied that in the not too distant future all pharmacy students would be coming out of university with SP already 'under their belt'. That was what tipped the balance for me but there were mixed feelings, with some of the older pharmacists saying they were not going to do the training but others who were all for it. Some of the younger ones said they were not going to do the training because they had a life outside pharmacy.</i>
July 2004	<i>Approached local GP practice with a view to becoming an SP. You need to have the GPs fully on board for SP to work – if you have to pressurise them it never will. I didn't have to convince them of the value of SP, I just had to offer them what they wanted which was the capacity to take over some of their work. If you don't know how you're going to make the approach to the doctor, then you don't know the doctor well enough to do SP.</i> <i>I went to the senior GP partner because he was the one I felt I got on best with, on the assumption that I was going to have a lot of interaction and</i>

	<p><i>need assistance. I knew that he would find time if he possibly could, he's also one of the less stressed and I don't like to add to people's stress. You've got to have a really solid relationship with the GP otherwise you'll get through the course but I don't think you'll do it correctly.</i></p>
Sep 2004	<p><i>Began supplementary prescribing course so that I would be able to produce and sign repeat prescriptions for the surgery. Had no idea how huge the workload was going to be, even though I had spoken to someone from the first cohort who had warned about the high workload.</i></p> <p><i>The volume of work is not the only problem; it's also difficult trying to understand what is required for the portfolio. Describing how you are going to fulfil the competencies is not really that difficult e.g. How am I going to store my prescription pads? I'm going to lock them in the safe. You get into the mentality that it must all be much harder than this to prove your competence otherwise you wouldn't be asked.</i></p> <p><i>During the 12 days I spent in practice observing the doctors' consultations, I was horribly aware that I was intruding. It is disruptive to their practice and a couple of times I thought I was distracting them from what they should be doing. I was certainly aware I was distracting the patients, they kept throwing questions at me and I had to try and deflect that. I found I was sitting further and further into the corner.</i></p> <p><i>Whilst observing the consultations I had an ethical dilemma where I felt the GP should have done something differently and that was really hard to deal with, even though we'd learned about such situations on the course. I asked him why he'd said what he did to the patient and he explained. It made sense to me but I doubt it did to the patient and so I don't think she will have done what the GP suggested. I've realised how important it is to be able to have those sorts of conversations with the GPs to understand their reasoning.</i></p>
May 2005	<p><i>Qualified as a supplementary prescribing pharmacist. The PCT is supposed to be installing a second computer link in a room I have set aside for patient consultations.</i></p> <p><i>There have been considerable financial costs to me in spite of the fact that the PCT are contributing to my costs. I have had some support with backfill but that has worked out at 22 days at £170 per day to cover while I was not here and the PCT has only given back half of that.</i></p>
June 2005	<p><i>The second computer link has still not been installed!</i></p> <p><i>I'm having some concerns about how the patient gains in all of this. I can see lots of potential advantages for the doctors because they are going to pass over to me some of their routine work like hypertension clinics and checking cholesterol levels. This is not particularly challenging stuff but it takes up a lot of time and the doctors are happy to lose it. But what is the advantage to the patient? All the patient is going to do is see me rather than the doctor and my availability is not going to be as high as the doctors', so the patients are not getting any better access to health care advice. Also I can't deal with the "Oh, by the ways" which you often get where people have come for a blood pressure check but ask you to check</i></p>

	<p><i>their painful shoulder. I've got to tell them that I can't deal with their shoulder and they will have to go to their GP – so again no advantage for the patient.</i></p> <p><i>One way of giving the patient a better service would be to run clinics in the evenings and Saturday mornings, but I'm concerned that I may not have any medical back-up if things go wrong or if I need advice. I'm trying to work this out and maybe the answer is to agree telephone contact with a GP during those times or use NHS Direct.</i></p> <p><i>I am also concerned about who is going to pay me to take on the extra work. I don't have anything agreed yet and won't progress this further until I do.</i></p>
<p>September 2005</p>	<p><i>When I started the course we had not got our new (pharmacy) contract and although we knew it was going to be different, we didn't know how different, and how much work was going to be involved in getting ready for it. That's one of the reasons I haven't made much progress this summer because as of October 1st I have to be ready on the new contract. I have to make sure that's in place first because that's 'bread and butter'. I have a business to run and still haven't sorted out who is going to pay me to do the extra work that will be involved in supplementary prescribing.</i></p> <p><i>If I had known beforehand how difficult it was going to be to apply supplementary prescribing I might not have done the course.</i></p> <p><i>I am still waiting for the second computer terminal to go into my consulting room and with it will come a prescription printer so then I will be able to generate prescriptions. I thought this was going to happen a year ago!</i></p> <p><i>The NHS computer software EMIS, didn't allow computer generated prescriptions for supplementary prescribers but I understand this has now been changed and the electronic transmission of prescriptions is coming in one, two, three or four years – depending on who you speak to.</i></p> <p><i>All of my clinical management plans will be agreed with the doctors before I treat the patient. I have potentially six independent prescribers and the IP will be whoever is the current GP for the specific patient – all of the GPs have signed up to be involved in supplementary prescribing.</i></p> <p><i>There are a number of reasons other than the new contract, why I haven't really got going with the prescribing and one of those is that in the back of my mind I'm wondering whether independent prescribing is going to happen. I think that probably is the solution we're looking for – supplementary prescribing will be just a phase people pass through in the future.</i></p> <p><i>I'm hoping that upgrading from a supplementary to an independent prescriber will be relatively easy!</i></p>

It was clear from talking to Ray that making the transition from secondary care pharmacy practice to community pharmacy had not been easy. Not only had he had the problems of financing his own business but he had talked in his first interview of how isolated he had felt from the support of colleagues. It had taken some considerable time to build up relationships within the community setting both with GPs

and other healthcare professionals who might impact upon his business and pharmacy practice, and with patients.

As can be seen from his diary, the development of Ray's role had begun in 2002 with the installation of computer links with the local GP practice to enable him to provide repeat prescriptions. One of the most interesting aspects of this was his comment that he received a poor level of support from the PCT IT section.

Ray had overcome many of these difficulties by the time of our second interview and it could be suggested that his experiences of obtaining patient consent could be particularly useful to others following the same career path. Here, the collaboration with the GP practice had resulted in an efficient means of providing patients with information and choice about who has access to their medical records.

The undertaking of supplementary prescribing training seems to have been a natural progression for Ray as he had pre-existing links with the local GP practice (see diary entry July 2004). He expressed the view that had he realised how much work was involved he might not have undertaken the training.

During his training, whilst observing doctor/patient consultations Ray encountered a situation which he describes presented him with 'an ethical dilemma'. Although he found the situation difficult to deal with, it was possible for him to discuss this with the GP (his DMP) because of the sound relationship they had built up over the years. This raises two issues which may be important for future pharmacy practice. The first is that it could be suggested that pharmacists may need to have greater exposure to professional and ethical dilemmas which could possibly be achieved through role play during their training as prescribers. A useful way of doing this would be to ask DMPs to give hypothetical situations based on their own experiences which could be explored during individual and group discussion. The second issue which arises is the importance of trusting relationships between doctors and the pharmacists. In Ray's situation the relationship with his DMP/IP developed over a significant length of time and he talked of the importance of planning in advance how approaches are to be made to doctors, regarding the implementation of supplementary prescribing.

Ray's experiences highlight the financial implications for community pharmacists attempting to implement prescribing practice. These began during his training when he received only a limited amount of financial support from his local PCT, with the majority of the costs being met by him personally. By the second interview Ray had still not begun to prescribe and one of the reasons for this was that he had been unable to come to an agreement with the PCT about who would pay for the extra services he would be providing.

Finally, and probably the most important aspect of Ray's experience, is his opinion that by September 2005 (6 months after the completion of his training in SP) he could not yet see any benefits to patients of supplementary prescribing.

6.6 Discussion: Phase 2

This section draws together themes and issues which arose in the course of both phases of this research and begins with the overriding themes which we perceived as 'golden threads' which ran through cases and settings, drawing upon existing literature, where available.

6.6.1 The Importance of Understanding

I think they do want to know because some patients are pleasantly surprised when you enlighten them as to their medication, why they're taking it but don't really feel it's their place to ask especially the older generation So I tend to tell them anyway and a lot of them go out and say 'that was really useful because I now know why I take my tablets in the morning and I now know why I have to take them at night' I think it just helps a lot really that they understand what to do and why they're doing it. (Pharmacist CS 3)

We have called this section 'The Importance of Understanding' because it is a theme which emerged many times during the participants' narratives. Pharmacists themselves, as the above extract shows, believe that patients want a better understanding of their medicines and that this can be facilitated by providing more time for patient consultations, by listening to what patients have to say and by using their expertise in the area of medicines.

However the importance of understanding worked on several levels. Health care professionals spoke of the need for patients to understand how supplementary prescribing worked and to understand more about their medication. Further, they spoke of the changing culture of health care and how important it was that patients understood that there were health care professionals, other than doctors, who could provide them with sound health care advice. During the interviews with patients some did not seem to realize that they could continue to see their doctor and said that there were certain things they would not want to discuss with a pharmacist. Doctors and other health care professionals expressed the view that since the pharmacists' role had developed into a more clinical one, there had been a marked improvement in the information that patients were receiving with the potential to reduce the risk of patients being prescribed the incorrect medication or dose.

The need for patients to understand the process, and benefits of, supplementary prescribing was similarly echoed by patients in the Patient Advisory Group. Patients should be given full information about SP before going to see the pharmacist and that consent should be obtained beforehand with the doctor. Patients need reassurance that they can return to the doctor should they have any problems with seeing the pharmacist. Patient participants said that since they had seen the pharmacist for medications advice and review they had been given more information than their doctor would give and found this information easier to understand. This they agreed, was partly because the pharmacists allowed them more time but also because they seemed to be able to explain things at a level which was more appropriate.

An understanding of the SP process by patients would alleviate some of the patients' concerns reported. For some patients, when they were first told that their medication review would be carried out by a pharmacist, there was a degree of mistrust and suspicion. Some said they wondered whether the pharmacist had enough knowledge to be able to care for them but also in doing so, their health problems had in some way been diminished, that they were no longer important enough to see the doctor.

Nurses and administrative staff also reported a lack of understanding about the pharmacist's role and did not know that he or she would be able to prescribe medication. Some talked of their perception of the pharmacist being the person behind the counter in a retail pharmacy and found it difficult to see the pharmacist in another light. When asked if they thought the community pharmacists and the pharmacists they worked with had the same qualifications, they thought not. Some pharmacists

had clearly worked hard to show others how supplementary prescribing can work in practice. In most cases, the pharmacists' colleagues said that once the role had been explained to them, they could see the potential for improvements in patient care.

The issue of understanding also was relevant to the hospital setting, of the need for, and implementation of clinical management plans and their requirement by law. There also seemed to be some confusion about the confidentiality of patients' records, whether patients should be aware of, and give their consent to pharmacists having access to their records. The issue of access to patients' records is discussed later in this section with particular reference to supplementary prescribing in the community pharmacy setting.

Finally, some doctors who were designated medical practitioners said they would have appreciated a better understanding of what was expected of them in supporting a pharmacist's training in supplementary prescribing. They said that this would be particularly useful if the pharmacists had shown weaknesses in practice, because they would have been unsure how to deal with such a situation. Doctors said that having advice and support themselves from other experienced IPs would have provided this greater understanding. There is a need for universities providing supplementary prescribing training to make doctors aware of their role in providing DMP support so they feel able to undertake this role.

6.6.2 The Importance of Communication

Communication is always a problem and we have some 2000 patients who are anti-coagulated now, so it's a huge number of patients, a huge risk. We discover patients from time to time who have been on [this particular medication] which should have been stopped so that process needs to be tightened up 'some people [doctors] may feel that it isn't their responsibility anymore, to be concerned, and we mustn't have that otherwise its just going to make the whole process unravel a bit more'. (IP CS 4)

This issue of understanding, discussed in the previous section, can only be achieved through effective communication between health care professionals and patients both within and across settings. In the extract above a consultant IP talked of how, without good communication, the process of shared care will begin to unravel. In this sense, shared care can be defined as the care provided for the patient by teams of professionals within a setting but also across the primary and secondary care interface. Within the case study settings the care of the patient was becoming increasingly fragmented with doctors, nurses, pharmacists and others, undertaking more specialist roles. For example, in the primary care treatment of diabetes, doctors were making the initial diagnosis and prescribing first line treatment; nurses were taking blood samples, measuring weight and blood pressure and providing advice regarding diet and lifestyle. The patients were then passed on to the pharmacists who were prescribing and providing advice about medication. While this may make the best use of each professional's expertise, communication between professionals was vital for the process to work and to safeguard the patient's health.

In the hospital setting where the practice of shared care had been adopted, we were particularly concerned about the reported lack of communication between the hospital pharmacist and doctors in general practice. During the case study in which this was happening (CS 4), the pharmacist reported not being able to contact GPs to pass on information about patients' results and so being unsure whether patients had received correct and timely information about their medication dosing. It was also reported that

GPs seemed unaware that patients had been discharged from hospital on limited courses of medication and in some cases therapy had continued unnecessarily, potentially endangering patients' lives. Again, the pharmacist in this situation appeared to be taking the lead in communicating with GPs and although she was well supported by her IP, the support from GPs appeared to be lacking.

During the penultimate meeting with our Patients Advisory Group we discussed some of the communication and accountability issues at the hospital-primary care interface, when an additional prescriber is added. A number of problems with communication were raised, most of which were based on the patients' own previous experiences. These are given in Appendix 6.

Throughout the research pharmacists expressed a desire to greater contact with other supplementary prescribers but it appeared that many were not aware of the virtual network of supplementary prescribers set up by the RPSGB. It is important that all pharmacists are aware of the support that is available to them and be encouraged to make use of this. The building of relationships across the various disciplines involved in patient care was said by pharmacists to be important to the improvement of effective patient care. Pharmacists should be encouraged to not only communicate with other prescribing pharmacists but also to discuss prescribing issues with those in their prescribing setting.

6.6.3 The Importance of Knowledge and Skills

The decision that is taken [to prescribe] is a recommendation from somebody with a thorough grounding in pharmacology and medicines management. So if the profession is thinking 'are we able to prescribe, is it safe for us, do we have the skills'.... If we are dealing with these complex issues on a day-to-day basis, what makes us so unsure of ourselves that we can't do the simple straight forward work up of medicines? It's what we are trained for it's what we are alleged to be experts in, why can't we grasp the opportunity, at the end of the day it's for patients' benefit. (Pharmacist CS 1)

At the end of each case study the researchers interviewed the pharmacists a second time to talk about any issues that had arisen both during the case study, and in the intervening time since the first phase interviews. Through these interviews and the observation of patient consultations it became clear that pharmacists possess knowledge and skills which are unique to their profession. However, as the above extract shows, pharmacists believed that some pharmacists lack the confidence to become supplementary prescribers.

Much of the discussion about confidence in their own abilities emerged from the first phase interviews. From the conversations with participants it is clear that they require a high level of self-confidence in order to overcome initial barriers to the development of their role. Such barriers include, poor levels of understanding on the part of other health care professionals regarding the knowledge and skills possessed by pharmacists. Yet, some of the doctors interviewed reported with the opposite concern: that an inexperienced or over-confident supplementary prescriber might make diagnoses and not refer patients back to the doctor if new symptoms were reported by the patient.

Although pharmacists, in general, demonstrated this broad skill base during the course of the case studies, two distinct areas of skills required by supplementary

prescribers emerged - interpersonal skills and knowledge of the job – discussed separately below.

Interpersonal skills can be described as the non-technical skills and traits that workers need to function in the workplace. They include consultation skills such as eliciting the patient's agenda, building patient rapport and involving patients in decisions about their care. It also includes general teamwork skills within the professional setting. These interpersonal skills form part of the supplementary prescribing training curriculum, where pharmacists have the opportunity to both observe the skills of others used during patient/doctor consultations and to practice their newly learned skills during OSCEs.

Pharmacists' opinions of their own skills in these areas varied according to their past experiences of interacting with patients and the length of time they had been practicing. This is evidenced by the primary care pharmacist who said she used her 'intuition' when assessing what patients were telling her, saying that she could tell when a patient was not happy about something and would gently probe to find out what that was.

Although the pharmacists said they felt confident about their patient consultations, we did observe a pharmacist miss patients' cues (see section 6.4.6). This may be due to inadequacies in pharmacist's SP training. It could also be that the training courses in supplementary prescribing can only go so far in teaching pharmacists' interpersonal skills. In order for pharmacists to become skilled communicators in their interactions with patients, they may need continued support and reiteration as part of ongoing practice. A further issue which arose from the observation of patient/pharmacist consultations was whether pharmacists need better training in how to break bad news to a patient. It could be suggested that patients perceive news about their health in different ways. For example, hearing that their cholesterol level is raised may be perceived as bad news to some patients depending upon their understanding of the implications involved. It is also possible that some pharmacists are unaware of the potential effects of such news upon their patients and so without appropriate training in this area, may unwittingly cause distress or undue concern.

There is no doubt that pharmacists and other health care professionals believe that pharmacists are the best people to be providing advice about medication to both patients and to their colleagues. Pharmacists said that one of the most significant changes in their relationships with doctors, nurses and administrative staff since the change in their role, had been an increased understanding that they possess skills other than those traditionally associated with pharmacy practice. It was felt by participants that one of the greatest benefits of supplementary prescribing was that patients now had access to the expert knowledge of a variety of health professionals. Limitations to pharmacists' knowledge, perceived by both pharmacists and doctors, were in the area of clinical examination and diagnostic skills.

There was also concern about the length of time it was taking some pharmacists to begin working as supplementary prescribers after they had completed their training. It raised the issue of whether the skills learnt on the course were retained and whether they would still feel confident putting the theory into practice. The issue of lapsing skills is perhaps even more important in the primary care setting where some pharmacists have limited experience of undertaking patient consultations

6.6.4 The Importance of Structure

The IT hasn't followed practice, so that the Government has sort of pushed through supplementary prescribing by pharmacists in the Department of Health, but in terms of producing a prescription that you can put through the computer that will print out – we haven't got one. So what you're doing is, you put it on the computer and then you transcribe across onto a piece of paper by hand and then you print out what's called the BPrint so that its on the computer – and the patient has got a copy of it but you've actually written out by hand what they're having so you could technically make a mistake in transcribing, so that's risky. If I was prescribing a list of drugs for somebody who had diabetes and I got a dose slightly wrong, the computer wouldn't have a record of it so that's an issue – that IT is lagging behind. (Participant 7)

At a broader level were the structures and surrounding environment which enabled a pharmacist to prescribe. Some trained SPs, because of organisational issues such as a lack of support at NHS Trust board level, had still not begun their prescribing practice. This was more evident in the secondary care setting (see section 5.4.3 'Clinical Governance'), though not exclusively so, and does raise the possibility that in some cases, the skills pharmacists' learn during their supplementary prescribing training may lapse. There is a need for the bureaucratic processes, and strategic planning for the use of pharmacist's skills, to keep pace with health policy initiatives to train and produce more pharmacist prescribers.

Smalley (2005) who qualified in one of the first cohorts of supplementary prescribing pharmacists, describes how on completion of her training she found herself qualified to provide a service, but with no framework of how the service should run in the primary care setting. Smalley, reports that it took 8 months for the GP practice to get the process of supplementary prescribing in place but that it had lead to a successful pharmacist-lead hypertension clinic. Some of the aspects she discusses are the development of CMPs, providing patients with a written explanation of supplementary prescribing (prior to participation) to facilitate awareness about supplementary prescribing, and ensuring that the entire practice team was aware of the new clinic and how it would be operated. Other preparations reported by Smalley were '*writing my job description, obtaining adequate indemnity insurance and confirming our understanding of the stepping stones between qualification and receiving prescription pads*' (p. 213). Such procedural and structural elements need to be in place before supplementary prescribing can occur.

As suggested by Smalley above, supplementary prescribing is not suitable for all patients or all diseases. A number of pharmacists interviewed expressed the view that the supplementary prescribing legislation for pharmacists had been poorly formulated without adequate consideration for how it could be applied to pharmacy. Supplementary prescribing legislation needed to better reflect the specialist knowledge and skills of pharmacists. One of the main concerns of many of the participants in both phases of our research was that supplementary prescribing was better suited to the primary care setting. In primary care, the lines of responsibility were better defined with pharmacists working with one or more independent prescriber who was easily identifiable and with whom they had a higher level of contact and accessibility should the need arise. In the secondary care setting, the supplementary prescribing process was less defined. The fact that we found little evidence of the effective use of clinical management plans in hospitals is perhaps a reflection of the difficulties the pharmacists there are having in implementing the

legislation. In some cases, the lines of responsibility were unclear and some IPs seemed unaware of the full implications of the CMP. In the case study 4, the patients were under the care of different doctors (both in the hospital and in the community) making the safe implementation of supplementary prescribing impossible. The National Patient Safety Agency has produced a safety guide emphasising the need for a safety culture and a comprehensive risk management system, acknowledging that any development, change or innovation brings new risks as well as rewards (National Patient Safety Agency, 2005). A recent clinical governance framework from the Royal Pharmaceutical Society also endorses this approach with recommendations for clinical audit and risk management programmes, continuing professional development and the integration of pharmacist prescribing into workforce development plans (Royal Pharmaceutical Society of Great Britain, 2005).

Elfellah, Hillis and Jappy (2005) report the successful implementation of supplementary prescribing in the hospital setting where it has been adapted for use in the discharge process. They report a reduction in junior doctors' workload, a faster patient discharge process and increased bed turnover. Here, existing protocols and guidelines have been used to produce clinical management plans which were then approved by the local supplementary prescribing committee. These were then agreed by the supplementary prescriber and local consultant doctors. The above authors do point out that in secondary care the CMP is a somewhat repetitive document with its main function in the setting they describe, being to fulfil the legal requirements for supplementary prescribing. They say, '*The CMP is a useful document to assist the supplementary prescriber when running a clinic for chronic disease. The situation is different in hospital, where the pharmacist is a member of a team caring for the patient daily and where the medical notes and the inpatient prescriptions are easily accessible*' (p. 338).

7. Conclusions

The pharmacist supplementary prescribers who participated in our study generally expressed overwhelming support for supplementary prescribing and were satisfied with many aspects of their new role. In several settings, the role of the supplementary prescriber worked extremely well: integrating within settings to complement and expand existing services. Where supplementary prescribing worked well it was evident that there were clear lines of communication and responsibility. There was also an understanding of what supplementary prescribing involved and the role of the supplementary prescriber was thought through and planned to work within the prescribing setting.

Most supplementary prescribers had a long-standing relationship with their independent prescriber and a strong element of trust already existed between them. Supplementary prescribing helped them break new professional ground and, from the narratives related to us, seem to be providing clear benefits to patients in terms of increased medicines information, monitoring and support. From this perspective supplementary prescribing has been a clear success. Yet, because we only interviewed those who have successfully developed (or begun to develop) a supplementary prescribing role, this may be an atypical group of professionals with a flair for overcoming the challenges presented to them. However even these professionals experienced difficulties with their role and it is from this perspective, and the perspective of other professionals and patients involved in this research, that we would offer the following recommendations.

Implementation of Supplementary Prescribing

There was clear support for funding supplementary prescribing (for NHS employees) but there appeared to be less consideration as to how the supplementary prescriber would function within the prescribing setting after training was completed. Funding support and the practical support needed to practise as a supplementary prescriber need to run in parallel. Particularly in situations where pharmacists were re-writing prescriptions or re-entering prescribed items onto computer systems, the inadequacies in the structural systems surrounding prescribing introduce new elements of risk (e.g. prescribing errors) that were not present before. For example, to work as a supplementary prescriber, a pharmacist will also need to consider:

- Office space including a phone, a computer and equipment to conduct examinations
- Prescription pads and the ability to prescribe, and issue, prescriptions on the prescribing setting's computer systems
- What clinical area(s) will the pharmacist prescribe in? How will this integrate with the setting's existing services?
- Funding issues – who will pay for the pharmacist supplementary prescriber and at what rate. How will the pharmacist's prescribing be monitored?
- How will supplementary prescribing be presented to patients? How will the prescribing setting ensure that patients feel able to refuse to see the pharmacist? How will patient benefit be monitored?
- The development of procedures to identify lines of professional responsibility amongst the different health care professionals.
- How the pharmacist's professional development will continue to be supported within the prescribing setting.

These processes require action by pharmacists, their employers and health care policy makers to ensure that the benefits of supplementary prescribing are realised and not impeded by structural inadequacies.

Supplementary Prescribing in Community Pharmacies

Both patients and professionals had some reservations about the use of supplementary prescribing in community pharmacies where there were more likely to be difficulties with medical record access, physical distance from the independent prescriber and lack of funding to provide this service. Pharmacists need to have access to a patient's medical record in order to safely prescribe yet the patient also needs to be clearly informed, and give permission for, that access. However, we found community pharmacies where this had been overcome, and supplementary prescribing was working well. It did seem to be extremely important for community pharmacists who wanted to prescribe to have good links with the PCT, and for the PCT to be prepared to support supplementary prescribing. Also, the pharmacist needed to have a strong working relationship with his local practice, and a willingness from that practice to allow computerised remote access by the pharmacist to patient records. For these reasons, community pharmacists may need to have additional support from PCTs (financial, development of contacts and IT) in order to establish themselves as supplementary prescribers.

Supplementary Prescribing and Patient Centred Care

The Department of Health's aims for supplementary prescribing included improved access to medicines for patients, greater use of the pharmacist's skills and a decrease in GP workload. The qualitative nature of this study means we are unable to comment

as to whether supplementary prescribing has improved access to medicines or decreased GP workload. However, the evidence in this report would suggest that pharmacists consider their skills to be more effectively utilised as a supplementary prescriber. In addition, most respondents suggested that pharmacists were a good (or, at times better, compared with doctors) source of medicines information. Yet supplementary prescribing does appear to run contrary to other health policy initiatives advocating a 'patient-led' NHS (Department of Health, 2005b). The easiest way to develop supplementary prescribing is for pharmacists to run single condition disease management clinics (e.g. hypertension clinics). However, pharmacists are likely to encounter patients with multiple co-morbid conditions with complex prescribing issues. Even in situations where pharmacists can prescribe for several clinical conditions, the issue of multiple co-morbidities can arise. In these situations, pharmacists must decide if they will prescribe outside their clinical management plans, create a new clinical management plan retrospectively or refer the patient back to the independent prescriber for a condition in which they may feel competent to prescribe. From this perspective supplementary prescribing can be seen as a development which benefits the system (potentially by decreasing GP workload) and particular professional groups (e.g. pharmacists by using their clinical skills) but does not meet the needs of this group of patients. While supplementary prescribing may increase access to care for some patients, it can also be confusing for patients with co-morbidities to navigate the system with additional prescribers and to know which prescriber to consult with for which aspect of their clinical care. In this sense, supplementary prescribing can be seen as being distinctly at odds with patient centred care, designed around the capabilities of the system of care and different professional groups, not the needs of patients.

Greater Awareness of Supplementary Prescribing

There needs to be greater publicity surrounding the benefits and rationale behind supplementary prescribing. Both patients and professionals expressed a lack of awareness of what supplementary prescribing entails and how this could be applied in their practice setting. Pharmacist supplementary prescribers often had to demonstrate considerable skill in being able to 'sell' the benefits of supplementary prescribing. This process could have been easier if there had been an existing level of awareness of what supplementary prescribing entailed. Professional bodies, local NHS service providers and the government all have a role in increasing public awareness of supplementary prescribing.

Patient Information about Supplementary Prescribing

Patients, although generally amenable to having a pharmacist prescribe for them, were not always made aware of the process of supplementary prescribing before going to see the pharmacist. Patients need to be told what supplementary prescribing is, why they have been selected to see a pharmacist, what the potential benefits of supplementary prescribing are, their right to refuse to see a supplementary prescriber (at the outset or at any time later on), what to do if something goes wrong and when, and in what circumstances, it would be appropriate for them to see their doctor. More time for discussion and continuity of care, may be two aspects of supplementary prescribing which could appeal to patients and can be used as 'selling points' in material provided to patients on the benefits for them in seeing a pharmacist prescriber. Standardised printed information should be provided to supplementary prescribers to aid this process of improving patient understanding about supplementary prescribing.

Documentation for Supplementary Prescribing

There was considerable variation in the detail and scope of clinical management plans, with CMPs less likely to exist in secondary care at all. The role of clinical

management plans needs to be clarified to determine whether 'generic' clinical management plans are acceptable practice and whether they are needed at all in secondary care where existing protocols have been in place for a number of years. The legality of these practices needs to be considered before future adverse events arise. Clear guidance at both a national and local level is needed to ensure that practitioners are aware of their limitations and liabilities of existing practices.

Ongoing Support for Pharmacist Supplementary Prescribers

A range of views were expressed about the value of pharmacists' supplementary prescribing training but most considered the practice element of their training to be the most valuable. However, several participants expressed a need for continued support after training when new questions about their current practice arose. The support could be provided from their prescribing setting (e.g. from other practitioners in their setting), with other SPs (e.g. using the internet) or workshops. These workshops could update skills learned during supplementary prescribing training, for example in communication and consultation skills, and be a forum for debating ethical dilemmas encountered in supplementary prescribing practice.

Lapsing Skills

It was noted that some pharmacists had not yet begun to use the skills they had learned during their supplementary prescribing training, some considerable time after this had been completed. In the light of this, it is recommended that pharmacists need to begin working as a supplementary prescriber within one year after completing their training, or else they will need to re-train.

Independent Prescribing

Supplementary prescribing raises wider theoretical questions as to what constitutes prescribing. Some pharmacists were amending computer records yet were unable to print and sign prescriptions. Others were verbally making clear decisions about treatment choice yet were not the person 'signing off' on a prescription or medication chart. In line with earlier comments, clear lines of responsibility need to be identified with those making the decisions taking responsibility for them. Risk management systems need review when developing new services with pharmacist prescribers. In an already complex health care system the addition of supplementary prescribing requires patient safety and clinical governance issues to be re-visited to determine their impact at all levels of service provision, from an individual patient care level to a strategic managerial or policy level. In line with comments made earlier, the issue may be less about the facility to prescribe in a range of clinical areas but rather that (1) pharmacists act within their professional competence and (2) that there are clear lines of responsibility and appropriate risk management systems in place and (3) that the procedures and work practices surrounding pharmacists' prescribing are explicit and transparent.

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Appendix 1 – Economic Report

An Economic Commentary on the University of Bath’s Supplementary Prescribing Research Report (“The Bath Report”)

The views expressed in this commentary are the author’s own and not necessarily those of the PPMMG or the University of Leeds

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Contents

- A. Summary of Research Recommendations
- B. Introduction: What does an Economic Perspective Offer?
- C. Policy Context: Setting the Scene
- D. Economic Evaluation of Training for Supplementary Prescribing
- E. Economic Evaluation of Supplementary Prescribing Practice
- F. Incorporating Patients' Evaluation of Benefits
- G. Infrastructure and Support for Supplementary Prescribing
- H. Concluding Comments
- I. Glossary
- J. References

A. Summary of Research Recommendations

1. Economic evaluation of training for supplementary prescribing in general, and taking into account different modes of delivery.
2. Assessment of frequency and extent of re-training and/or re-validation.
3. Full description of supplementary prescribing practice in the current state of the world.
4. Economic modelling of different prescribing skill mix options, to estimate cost-effectiveness and aid long-term capacity planning.
5. Evaluation of the benefits of supplementary prescribing from a patient perspective.
6. Assessment of impact on practice of poor communication and integration of information technology.
7. Economic evaluation to assess where pharmacists (perhaps a scarcer resource than doctors and nurses) can add the most value to patient care.
8. Economic evaluation of pharmacy skill mix to determine (if necessary) how pharmacist time can be most cost-effectively released.

B. Introduction: What does an Economic Perspective Offer?

I have been asked to provide an economic view on research about supplementary prescribing (The Bath Report). In doing so I have three main objectives:

- To provide some recommendations for future (economic) research
- To provide an economist's view on some of the research findings
- To critically reflect on the development of supplementary prescribing

A glossary (part I) defines several terms (as they are used in this report) that may have unfamiliar, lay or technical (often disputed) meanings. Economics is both a social and a behavioural science. As a social science, its most influential idea is that properly functioning markets act to equalise supply and demand (at a particular price), thus generating efficiency. Welfare economists generally argue that markets for healthcare do not function well (for a variety of reasons), that price is not a good indicator of quality in health services and that economic evaluation is needed to assess healthcare efficiency (Donaldson and Gerard 1993). Economists differ in how they believe such evaluation should be performed.

A pure welfare theory approach implies that CBA is the only appropriate type of evaluation (costs and consequences in monetary terms) and that all costs are relevant (except transfer payments) (Johnston et al 2001: 219). In providing this commentary, I normally take an alternative (extra-welfarist) approach as most often used by UK health economists working with the NHS. This approach implies that the main purpose of economic evaluation is to provide decision makers with information relevant to the budgets that they hold. Thus the perspective of the NHS is normally taken and appropriate forms of evaluation may also include CMA, CEA and CUA. Alternative perspectives are: patient, professional, higher education institution (HEI), single healthcare organisation and societal. If alternative perspectives (or welfarism) are adopted for the sake of discussion or argument, then this will be clearly stated.

As a behavioural science, economic principles state that (mainly financial) incentives influence the behaviour of individuals and organisations. Individuals are taken to be the best judges of their own welfare, and (other things being equal) will act to maximise personal gain. The components of welfare for individuals may include: income, leisure time, health status and professional satisfaction. Perverse incentives encourage behaviour that benefits one individual to the greater detriment of one or more others. In the context of supplementary prescribing an economic view may, therefore, be concerned with efficiency (usually at an organisational level) or incentives (usually at an individual level).

A narrow focus on the best way to prescribe given a limited budget (e.g. using nurses, doctors and pharmacists) implies a focus on technical efficiency using methods such as CMA or CEA. A broader focus on patients' health more generally, or alternative uses for pharmacists, implies a focus on allocative efficiency using methods such as CUA or CBA. Pursuit of efficiency generally embodies a value judgement that we should seek the greatest good for the greatest number of people (i.e. a utilitarian ethic). However, it should be noted that when service provision changes improved efficiency may leave some worse off. There are usually winners and losers, but the winners gain more than the losers lose. Losers may be compensated or pure efficiency may be sacrificed for the sake of equity (perceived fairness). Thus, patients may be sympathetic to non-utilitarian value judgements, for example, that 'need' concerns seriousness of illness rather than capacity to benefit from treatment. The active influence of consumer choice would require (among other things) that:

- Alternatives services and delivery options are available

- Consumers understand the options and can relate them to their preferences
- Consumers are able and willing to choose between options
- The consequences of different options are readily apparent

It does not seem that these conditions are met in the case of supplementary prescribing. In reality, patient need is still more likely to be expressed in demand from other health care professionals who refer to supplementary prescribers. Therefore, need (if any) for supplementary prescribing is objectively assessed by professionals (as capacity to benefit) and offered to patients for their agreement. This is reflected in the 'initially sceptical' view expressed in the Bath Report by the Patient Advisory Group.

C. Policy Context: Setting the Scene

It is possible to provide a rationale for supplementary prescribing based on healthcare policy concerning patient choice and professional development. Patient choice (or responsiveness to local need) may be problematic if it leads to the distribution of new services by postcode. Economists wouldn't generally argue for the same level of service to be provided universally, government often does if only to avoid adverse public relations. Professionally, in some respects supplementary prescribing provides a legal framework for existing activities. One could logically argue that since regulation and training add to the cost of providing services, any existing services now provided under supplementary prescribing are necessarily less efficient. Now that a legal framework is in place it is also possible to contemplate the development of new services (or old services with different providers), the efficiency of which is unknown. This tension (between the 'old legalised' and the 'new contemplated') is apparent in the research interviews. From a professional perspective supplementary prescribing can be a legal solution to a technical problem; from a patient perspective it may be a solution seeking a problem. This may explain why the take up of supplementary prescribing described in the Bath Report was somewhat lower than initially expected, and has implications for an economic assessment: particularly in relation to the benefits that may accrue to patients. We should also note other developments in pharmacy practice, which are making alternative demands on a scarce resource. The economic evaluation of supplementary prescribing may broadly concern:

- The cost-effectiveness of current practice (most narrow), and/or
- The most efficient way to prescribe, and/or
- The most efficient use of pharmacists' (and others') skills, and/or
- The most efficient use of societal resources (most broad)

Clearly, the government, the public, other healthcare professionals and pharmacists will have different views on the importance of (and rationale for) supplementary prescribing. Evaluation should attempt to be disinterested and balance the interests of different stakeholders. Clearly some pharmacists see supplementary prescribing as an intermediate step to full independent prescribing. The costs and consequences of future options therefore require careful consideration and analysis.

D. Economic Evaluation of Training for Supplementary Prescribing

There is an accreditation process for supplementary prescribing training, but modes of training are flexible and may include (in varying proportions):

- face to face learning
- distance learning

- virtual learning
- mixed learning (nurses and pharmacists)
- workplace learning

Evaluating the effectiveness of training may proceed in a number of ways, which are (in increasing order of difficulty and importance):

1. Assessment of student feedback and satisfaction, and/or
2. Assessment of competence (i.e. achievement of learning outcomes), and/or
3. Assessment of performance (i.e. ability to prescribe and/or impact of prescribing)

From an economic perspective the first of these is trivial apart perhaps from student satisfaction if the course is self-funded. To be useful economically the second and third should also be accompanied by an assessment of costs. Techniques for the economic evaluation of teaching/training are not as well developed as those for healthcare. So, for example, there is no educational counterpart to 'health-related quality of life' that might be used in a CUA of an education programme. When educational programmes are subject to economic evaluation then CBA is the method usually employed (at least implicitly). One often hears reports about the impact (or otherwise) of education on workplace productivity. From the NHS perspective it may be sufficient to estimate training costs as:

- course fees
- plus any replacement staff costs (back fill)
- plus mentors' time

From the HEIs' perspective back fill and mentors' time are not costs, but the cost of academic provision may be more or less than the fees charged. Accurate bottom up pricing of all training components would be possible but complex. For example, one research participant noted that his DMP had increased consultation times to facilitate observation. Other comments suggest DMP involvement in training was limited or difficult to define. Training involves significant personal costs which economists would seek to account for, perhaps by applying a shadow wage rate to leisure time (typically 0.4 x normal wage). Training costs form just one part of overall practice costs, although they are likely to be an important part especially in the short term. Methods to incorporate training costs into the estimated hourly costs of health care workers have been developed (Curtis and Netten, 2004). Evaluation of current training provision is more difficult because it is not homogenous; evaluation should include clear classification of distinguishing characteristics.

Healthcare workers who want to prescribe are legally and professionally obliged to complete an approved training course. This strong compulsion necessarily means that the motives and intentions of those attending courses vary considerably. Furthermore, nurses and pharmacists may be trained together or separately. When trained together some compromise over course content is inevitable. When trained separately the benefits of inter-professional education are lost. The value of cross-sector and or inter-disciplinary training would benefit from more formal assessment.

Education broadly concerns the development of knowledge, skills and attitude. It is perceived that nurses have a relative lack of drug knowledge and that pharmacists have a relative lack of clinical skills. Those who perceive that they have certain knowledge and skills may not value further training, but are their perceptions correct? Certainly most pharmacists perceive that they have good counselling skills, but examples of poor practice were observed by researchers. How different are the

objective needs of nurses and pharmacists? This depends on whether they are used as complements or substitutes (see below) and not on their personal preferences.

Assessment of performance requires agreement on what the important outcomes might be for example (at a basic level):

- number of trained prescribers (CEA would give training cost per prescriber)
- ever/never prescribed (CEA would give training cost per active prescriber)
- number of prescriptions written (CEA would give training cost per prescription)

It is noted in the Bath Report that the last of these is not really a good marker of quality. More clinically relevant outcomes are probably best left to the economic evaluation of practice as whole rather than training in particular. In secondary care it seems that there are identified training budgets. Therefore, economic questions can be restricted to the alternative uses of that identified budget, and it may be fairly easy to make the case for supplementary prescribing. When there is no specific training budget, a much wider range of (often clinical) alternatives are relevant and the case for supplementary prescribing will be more difficult to make. Failure to prescribe following training is likely to be a 'deadweight loss' (pure waste: unless personal pharmacist development is taken into account) that should be estimated. It would be interesting to determine the quantitative effect of different practice (and personal) characteristics on uptake. The training of very experienced pharmacists seems to imply higher staffing costs than prescribing by junior doctors (for example) and would require compensating consequences. In order for supplementary prescribing to become more widespread the profile of those educated would have to change. Diffusion models (innovators, early adopters, late adopters, laggards) are widely used in business and economics. However, their application to pharmacy services is under developed, and may help capacity planning.

Important unresolved issues may be the frequency and extent of training (or competence assessment) needed in order to ensure continuing safe and effective performance. Given the lack of prescribing practice by some the timing and content of initial training may be questioned. Perhaps other forms of development would have been more appropriate for some but the availability of funding encouraged supplementary prescribing or the kudos of prescribing status was irresistible. A 'just in time' philosophy of training when there is an identified need and real possibility of service development is likely produce more confident practitioners and to be more efficient.

Likelihood that training will be used seems a sensible selection criterion, but one HEIs are unlikely to impose if demand is weak and they have per capita or 'cost & volume' contracts with Workforce Development Confederations. It is noted that some pharmacists had self-funded indicating that health care organisations were not in fact willing to pay for training. Since those that benefit from a good or service should in general be 'willing to pay' this is worrying. Either a) the (business) case for training has not been well made b) alternative uses for scarce resources are preferred. In either case one doubts the wisdom of proceeding with training, since the lack of funding implies later difficulties with service development. The ease with which people obtain places on courses is also indicative of weak demand and in turn a low level of perceived need.

E. Economic Evaluation of Supplementary Prescribing Practice

The economic evaluation of practice falls into three categories, presented in order of likely complexity:

1. existing services made legal

2. old services with different providers
3. new services

Economic evaluation itself should be performed efficiently; this requires concentration on those costs that vary in the options under comparison. To be efficient pharmacist supplementary prescribing must either be:

- Preferred by patients (for whatever reasons)
- Cheaper (either service and/or drug costs)
- Clinically better (improved outcomes and/or reduced risk)

Patient preference is considered in more detail in the next section. Economic evaluation of supplementary prescribing requires agreement on how consequences should be measured. There are two broad options: clinical indicators (mmHg, cholesterol levels etc.) and final outcomes (morbidity measures, health-related quality of life, mortality, welfare). Clinical indicators would be used in CMA and CEA; final outcomes would be used in CUA and CBA. General evaluation of supplementary prescribing is problematic because it is clearly not a single entity: it is practiced in different ways in different settings.

Economically, a major issue seems to be the extent to which doctors, nurses and pharmacists are either 'complements' or 'substitutes' (Begg, Fischer and Dornbusch 1994: 88). This determines appropriate skill mix. If they are complements, then this might suggest a model where doctors diagnose, pharmacists prescribe and nurses provide on-going care; each sticking to their specialist role. This is similar to current practice in secondary care, where pharmacists often informally prescribe and have a major role advising junior doctors. However, this model (where demand for each professional is positively correlated) is also likely to be expensive. Demand for each profession may grow initially, but then fall as budget constraints are reached and other models are adopted.

If they are substitutes, then this suggests that prescribing will be done (other things being equal) by the professional that provides the best service at the least cost. As wage rates for one profession rose, other professions would pick up their old tasks. Currently, shortage of doctors is driving some of the demand for nurses and pharmacists to act as substitutes. They will not be efficient substitutes if they lack the confidence to make decisions and refer a high proportion of their work back to independent prescribers. Increasing the complexity of work left with independent prescribers may have ambiguous effects on their own job satisfaction, for example, allowing less 'downtime'. Given that there are many more doctors and nurses than pharmacists, mass prescribing by pharmacists may be unlikely. Pharmacists may find themselves in advisory roles devising protocols for (cheaper) nurses to follow. If a number of plausible prescribing models could be agreed, then some economic modelling may be useful to predict the likely demand for (and cost of) professionals in a range of future states of the world.

Pharmacists seem to desire greater responsibility based on their specialist knowledge of drugs, but have little desire to take on diagnosis. In this regard, pharmacists note that they have fewer physical examination skills than nurses, but seem hesitant to develop them. If independent prescribing by pharmacists develops (as one model) it seems doubtful that this artificial barrier between diagnosis and prescribing could be rigidly maintained. At the very least checking the on-going suitability of medicines requires some level of diagnostic skill. Also, although pharmacists' belief in their superior knowledge may be shared by doctors and nurses, it may not be shared by patients. Whether or not pharmacists see dispensing (for example) as challenging or not, it is an important activity (at least requiring some supervision) and one that

patients expect to be performed well. In community practice physical changes to the environment (e.g. consultation rooms in high street pharmacies or greater focus on ethical activities) may be required for patients to accept and have confidence in a prescribing role. These changes have implications for costs and also the business model community pharmacies adopt.

Currently, demand for the services of supplementary prescribers seems to be higher (or at least clearer) in secondary care. Yet lines of responsibility and accountability seem clearer in primary care. It may be that although pharmacists in secondary care need and deserve greater responsibilities the supplementary prescribing framework is an imperfect way to achieve this. What would be more appropriate? The lack of accountability indicates more general structural problems in the management of secondary care services – of which problems with supplementary prescribing are but one symptom. In primary care, it seems that professionals' confidence in each others' abilities is important. However, this confidence is related more strongly to personal relationships than acceptance of valid qualifications, which is hard to quantify. If better on-going relationships with DMPs add value in primary care, then it is important to assess this.

If primary care organisations do not see the value of supplementary prescribing then they will not fund training or pay a premium for the service. Therefore, there will be little incentive (beyond professional satisfaction) for more pharmacists to get involved. Clearly many preferred activities in primary care are led not by detailed economic evaluation of services, but by the incentives inherent in the new General Medical Services contract (nGMS). In an ideal world, nGMS incentives would be evidence based and that evidence would include economics. nGMS may provide perverse incentives (process-led rather than patient focused) to provide certain services even when others are of greater proven value. If initiatives like supplementary prescribing are considered important then this can be encouraged by appropriate changes in financial policy and contracting. If primary care financing does not encourage new prescribing then commitment to stated healthcare policy (and/or policy maker competence) must be questioned.

The incoherence of healthcare policy is also illustrated by problems faced when supplementary prescribers are tempted (by patient care needs) to prescribe outside the confines of their CMPs. Although providers are encouraged to design care around patients it may be a mistake to believe that all policy is patient focused. Differences in policy makers stated beliefs, intentions and actions may be instructive. Economists would tend to judge the importance of policy by the size of budgets allocated rather than the number of reports written. Especially as reports can be high-jacked by specialist professional interests. Whereas it is the Government's (and particularly HM Treasury's) job to balance the public interest over a complete range of competing services.

Secondary care pharmacists seem to be finding that the personal costs of writing CMPs (as required by law) are not justified by the benefits. If CMPs are considered important some solutions are implied:

- Widen the definition of CMPs to include equivalent information in patient notes etc, or make CMP more generic (reducing costs).
- Police the use of CMPs and impose sanctions when they are not written (increasing service costs but also the personal benefit of compliance).

To some extent the current cost of writing CMPs (to the required standard) may be front loaded and much reduced when services mature. CMP writing costs could therefore be treated as a capital cost, to be apportioned over their expected lifespan. Administrative costs associated with clinic/practice management and referrals need to

be assessed. Especially in primary care where the gatekeeping and sign-posting roles of reception staff are crucial. There is some evidence in the Bath Report that administrative staff are themselves picking up roles from pharmacists (like routine prescription audit) the effectiveness of which is unknown.

Pharmacists seem to be adopting more general prescribing roles (required broad CMPs) and nurses more specialised ones. This links with the debate over who has ultimate responsibility for care as patient contact with a range of professionals grows; and the discussion above about complements and substitutes. The European model of healthcare has more specialised practitioners in community settings. However, the dominant UK model has emphasised the value of GPs with a holistic view of patients' healthcare needs. As group practices grow larger and the connection with a particular GP grows weaker, a more European model may develop. However, in Europe the specialist practitioners are fully qualified doctors (and hence independent prescribers) with full accountability and responsibility for a) their own aspect of care and b) making sure their care does not compromise that of any other practitioner. In the developing UK model (non-medical) specialists may find themselves less able to ensure the latter.

F. Incorporating Patients' Evaluation of Benefits

Uppermost in the minds of many pharmacists are the advantages of greater responsibility, autonomy and status that prescribing brings. It seems that the benefits for patients though assumed are less clearly elucidated, and that their level of involvement in decision making is questionable. Patient focused evaluation would need to incorporate some assessment of consequences from the patient perspective. This assessment may be performed as well as or instead of more usual measures of consequences described above. Conjoint analysis is an interesting technique for eliciting patients' preferences and considering service attributes beyond health outcomes (Ryan 1999, Ryan and Hughes 1997). In the absence of healthcare pricing, it is one of the best ways to obtain the monetary valuation of consequences need for welfarist analysis or CBA. The attributes of supplementary prescribing must first be identified, for example:

- Who the prescriber is
- Length of consultation
- Waiting time for appointment
- Waiting time in clinic

Then for each attribute realistic levels (or options) are determined, for example, in relation to the attributes above:

- Doctor, nurse, pharmacist
- 5 min, 10 min, 15 min, 30 min
- No wait, 1 day, 2 days, 1 week
- 10 min, 15 min, 30 min, 60 min

A computer programme is used to generate pairs of options (listing different levels of each attribute) that patients are asked to choose between. Statistical methods are then used to generate information about patients' strength of preference for each attribute. Thus, we could determine if waiting time or type of practitioner is more important and to what degree. If one attribute is money, then the analysis reveals willingness-to-pay (WTP) for other attributes. However, it should also be noted that WTP assessment is problematic in the context of the NHS and it is difficult to explain that payment will not actually be sought. Conjoint analysis generates much more information than simple WTP questionnaires, and enables the estimation of preferences for any combination of attribute levels.

Patient benefits proposed in the Bath Report are:

- Longer consultations
- In-depth medicines information
- Improved support for medicines taking
- Associated improvements in clinical care
- Access to general health advice

It should be noted that even if patients would be willing to pay for some of the benefits of supplementary prescribing (and this helps to provide a positive CBA) there is no reason to suppose that primary care organisations would actually pay higher service costs (that would increase costs per QALY in CUA) to produce better general patient satisfaction. To assert that better information necessarily leads to greater patient adherence and patient outcomes is an article of faith requiring greater empirical

support. Not needing to see a doctor may have unexpected effects on patients' perception of their ill health, and greater knowledge may lead to some unsupervised self-management.

Over time the workload of supplementary prescribers may increase reducing the impact of some proposed benefits. New prescribers themselves may also become complacent as the role becomes familiar and adopt less patient focused procedures. Patient familiarity and recognition that supplementary prescribers do in fact control access to the goods they want may also change the open relationships with patients that are currently reported. General health advice is increasing supplied on the Internet or via NHS Direct, so it is appropriate to compare this aspect of supplementary prescribing with these alternatives, and not just traditional prescribing.

G. Infrastructure and Support for Supplementary Prescribing

It is a clear that IT & telecommunication systems are not able to cope with supplementary prescribing. There are two issues:

1. Poor general communication, especially between primary and secondary care, which may be cultural as much as anything given the existence of phones, faxes, pagers and e-mail.
2. Poor integration of supplementary prescribing into normal prescribing practice.

The additional transaction costs imposed by both sets of problems (and possible solutions) deserve further evaluation, since they are a deadweight loss with no positive impact on consequences. It may be that in the medium to long term general investment in IT/communication will solve many of the problems – but solutions would need to be built in now as software is developed and hardware specifications made. Certainly the costs of imposing 'fixes' later will be greater than designing in solutions now. This still leaves short term problems to be ameliorated before they have too great an impact on early adopters and stifle diffusion (if desired). It is noted that IT developments also have the capacity to streamline medicines supply, for example, the robot dispensing mentioned by a research participant.

In addition to re-training or re-validation (discussed in Section D) other support costs may deserve greater consideration. The DMPs seem to be ill prepared and some additional training or resources material especially for them may be valuable. This could support mentoring in training and/or supervision in practice, but would increase current costs. Better patient education about new prescribing roles could also be considered. Supplementary prescribers themselves currently rely on informal networks for support and encouragement. As numbers grow, informal support networks may struggle to meet the need of prescribers and more formal systems may be needed. This could be funded by the prescribers themselves as and when they see the need, or planned as part of the NHS. The RPSGB is not fulfilling this role currently and it seems an unlikely part of its future remit.

H. Concluding Comments

In general terms, the positive (what is) and normative (what should be) analysis of supplementary prescribing (training and practice) both appear deficient. The Bath Report goes some way towards elucidating the major issues. In terms of positive analysis, the demand for supplementary prescribers and their roles in practice vary considerably. There is a great danger that any general evaluation would end up trying to compare 'oranges and lemons'. However, more focused evaluations run the risk of low numbers, low statistical power and poor specification of service components. In terms of normative analysis, reasoned arguments for different models of prescribing practice to suit different circumstances (diseases, settings, patient preferences) appear thin on the ground.

The economic evaluation of training for supplementary prescribing is generally straightforward, and a reasonably good estimate of value for money (based on basic indicators) could be produced quickly. The economic evaluation of supplementary prescribing practice is much more complex. Normal methods of economic evaluation may be helpful locally when objectives are clear and budgets defined. Globally, some modelling is required to help understand the costs and consequences of prescribing policy initiatives. This modelling should consider all plausible models of future prescribing practice and their impact on skill mix.

In primary care, supplementary prescribing is providing excuses to develop relationships and reduce professional isolation. One could argue whether the positive effects noted are due to the new form of prescribing itself or the enhanced levels of understanding/communication. In secondary care, anti-coagulation and other conditions deemed suitable for supplementary prescribing may be suitable candidates for self-management (Fitzmaurice et al 2005). Therefore, self-management is a plausible alternative course of action to be considered when modelling future practice.

I. Glossary

Capacity to benefit	Ability of individuals or populations to benefit from healthcare that is provided. Preferred way for equity concerns to influence practice.
Cost benefit analysis (CBA)	A type of economic evaluation (suitable for use when there is an open budget for public expenditure) that generates a net gain (or loss) expressed in monetary terms.
Cost effectiveness analysis (CEA)	A type of economic evaluation (suitable for use when there is a fixed budget within a particular healthcare programme) that generates a cost per unit of consequence (low costs per unit are desirable).
Cost minimisation analysis (CMA)	A type of economic evaluation (suitable for use when there is a fixed budget within a particular healthcare programme) that generates the lowest cost option (when consequences are known to be or assumed equal).
Cost utility analysis (CUA)	A type of economic evaluation (suitable for use when there is open budget for healthcare in general) that generates a cost per QALY (low costs per QALY are desirable).
Consequences	Effect of healthcare interventions on health or welfare of individual patients or the general population. Consequences may be beneficial (benefits) or detrimental (dis-benefits).
Costs	Resources (labour, space, equipment, consumables) used in the production of healthcare. Costs may be positive (expenditure) or negative (savings).
Economic evaluation	The comparative analysis of alternatives causes of action in terms of both their costs and consequences (Drummond et al, 1997:8-9). There are four main types: CMA, CEA, CUA and CBA.
Efficiency	Minimising opportunity cost i.e. providing the greatest benefit for the greatest number of people at the least cost (underpinned by Utilitarian principles).
Equality of access	Principle that NHS services should be provided without barriers (due to individual resource restrictions e.g. transport, disability, income) at the point of need/demand. Usual way for equity concerns to influence practice.
QALY	Quality adjusted life year. A combination of health-related quality life (on a 0 to 1 scale) and years of survival post intervention.
Transfer payment	Payment between actors that is not associated with any resource use (especially when societal perspective is taken), for example, value added tax (VAT).
Perspective	Viewpoint taken when carrying out economic evaluation, which determines the limit of cost and consequence identification/measurement/valuation.

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Appendix 2: Issues Noted by Patient Advisory Group

and how they have emerged / been addressed in the Data 24.08.05

These are issues which have arisen during the Patient Advisory Group Meetings and have informed the project throughout. Following each item (in italics) are examples of some participants' responses.

At Meeting 1

The group raised a number of concerns about supplementary prescribing by pharmacists. These include:

- Confidentiality of the patient's medical record. Would the pharmacist (for example, working in a chemist shop) have access to all patients' medical notes? (No) The patient's notes would only be seen by professionals who need to see this information (are prescribing for them) and would be done with the patient's permission.
One pharmacist just trying to set up his prescribing practice in community, GP practice decided to give patients the option of three different levels of access. They sign up to this then the GP only refers the patients to the pharmacist who have given full access
- Patients do not always see a pharmacist as a medical person – nurses are seen as being more medical.
Patients did say they wondered what qualifications the pharmacist had and did they have enough medical knowledge to understand their conditions
- Turnover. There is a high turnover of pharmacists at Lloyd's or Boots – would pharmacists 'move on' to another job?
One patient said that the turnover at her chemist was so high that she would never want to be treated there.
- Would pharmacists spend more time with patients? The typical GP consultation is 8.5 minutes – the typical nurse consultation is 14 minutes. Pharmacists are likely to have consultations lengths like nurses.
All patients said that they were allocated much more time with the pharmacist and that he/she listened more.

Pharmacists vary quite a bit – some are good and some less so. Patients may not have confidence in the pharmacist's knowledge (See 2)

At Meeting 3

1. Independent Prescriber Issues – Supplementary Prescribers seem to be keen to move towards this but the groups were not so sure. Wanted more explanation of what it will mean in practice. Contentious issue as there might be less access to GP, and Pharmacist would not be accountable to GPs anymore. Would Pharmacists have sufficient knowledge to judge in all circumstances they would need to deal with? Would they still refer back to GPs if necessary? Need for clear guidelines on relationship with others in practice – particularly the GP. *IPs and other doctors were concerned about this because of the blurring of roles. Would not want pharmacists to diagnose and most pharmacists don't want to diagnose but how do we prevent that?*
2. Links between community pharmacy and GP system – this is not yet in place so difficult for community pharmacists to take on Supplementary Prescribing role. *See example above*
3. Problem with GPs, practice nurses, nurse practitioners feeling threatened by the new role of SPs. How great is this problem? Do nurses see it as a greater threat than GPs (taking over their role etc)? Or does this vary according to

setting in which SP is working, and how well established SPs are in their work setting?

Some nurses said they felt a bit threatened at first but got over this once things had got under way. Two doctors said that they were sure some of their colleagues might feel threatened.

4. Relationships with patients – do they accept the new role of pharmacists?
Yes but in some cases it has taken time.
5. Lines of accountability and responsibility issue. Clarity of management structures within the prescribing setting a practically non-existent. Also relates to how issues are communicated within the practice.
Doctors don't seem to understand their responsibility as independent prescribers
6. Rise in pharmacist's role is partly due to GPs preferring a 5-day week as well as pharmacists picking up new patients who would not have otherwise been seen.
Patients said that seeing the pharmacist would help reduce the doctors' workload
7. Confusion issue. Difficult for patients to appreciate what is the set-up with regard to their care when they want to see someone – could be a nurse, doctor or a pharmacist.
Need better information.
8. Adequacy of Training Issue. Pharmacists need to have training in change management issues as part of their course. Someone new in the system has an effect upon everyone else within that system. This may particularly be an issue with regard to pharmacists' and nurses' roles overlapping (or there being conflict).
Those who are doing this successfully are the ones that thought things through carefully at the beginning.
9. Who monitors the effectiveness of prescriptions? (Pharmacists?) Ultimately it is the patient who does this.
No-one is evaluating the effects of SP at local level
10. Ongoing support issue. Interview 2 indicates that there are no formal processes for monitoring her progress and dealing with queries or any other issues. Makes it difficult for the pharmacist to figure out how best to work. Lines of responsibility and accountability appear to be unclear See 5
11. Likely to be wide variation in different practices as to how they work (depends upon age / experience of GPs / protective practices). Yes
12. Pharmacists 'scared' of prescribing but may become more relaxed over time – they should be aware of the importance of their prescribing decisions. *Yes but getting used to it.*

At Meeting 4

Scenario A All of the issues below were mentioned in patient interviews.

1. Phone doctor and ask what is going on
2. Being fobbed off onto a pharmacist
3. Good idea because they'd get more time
4. Need to know 'what's in it for me?' Don't just want to be 'shunted down a side alley'
5. Does this mean access to doctor is reduced
6. Will they see the doctor less
7. Is this 'instead of' or 'in addition to' seeing the doctor
8. If on medication for 30 years would worry that someone would come along and mess around with it

9. Concerns that SPs would do all the normal tests e.g. spirometry and record them on the computer
10. Some said seeing the pharmacist was just another version of seeing the practice nurse
11. Need introductory explanation
12. Why have I been selected to see the pharmacist?
13. Would like to have details in writing for reassurance
14. Would expect SP to see medical notes otherwise they can't treat effectively
15. Letter should come from doctor and should be vetted by the practice to ensure that it contains all the relevant information
16. Patients should be told that they can go back and see their doctor if they don't like the arrangement
17. Danger that lots of people would want to see the SP then he/she would become as busy as the doctors
18. SPs may provide better continuity of care than doctors due to 'open access'
19. Fragmentation of care. Seeing different professionals for different problems.
20. Who do you see if this doesn't work out?

Scenario B

1. Continuity of care
2. Need fairly rigid systems to begin with

Scenario C

1. Should there be differential access to medical records?

Appendix 3: Examples of CMPs

Sample CMP (1)

Hypertension Template for teams that have full co-terminus access to patient records

Patient identification

Patient medication sensitivities/allergies:

[Allergies]

Independent Prescriber(s): Dr		Supplementary Prescriber(s)			
Condition(s) to be treated Hypertension CHD Risk Smoking		Aim of treatment To achieve a target blood pressure as per BHS Guidelines(140/85) To reduce CHD risk To help patient to stop smoking			
Medicines that may be prescribed by SP:					
Preparation Bendroflumethiazide Atenolol, Bisoprolol, Metoprolol, Labetolol Ramipril, Enalapril, Lisinopril Candesartan, Losartan Felodipine, Amlodipine Doxazosin Aspirin. Simvastatin, Atorvastatin. NRT	Indication Hypertension CHD Risk CHD Risk Smoking cessation	Dose schedule Dose range stated in BNF for hypertension 75mg od Dose range stated in BNF for 1 ^o prevention As per BNF	Specific indications for referral back to the IP <ul style="list-style-type: none"> • Pregnancy and breast feeding • Sustained BP>or=150/90(on three occasions and on 3 drugs at maximal doses) • Suspected substance abuse • ADR • Irregular pulse • Suspected new morbidities 		
Guidelines or protocols supporting Clinical Management Plan: BHS Guidelines 1999 and 2003, BNF, CHD NSF, NICE guidelines for smoking cessation (March 2002) and Hypertension 2004, xxx Formulary.					
Frequency of review and monitoring by:					
Supplementary prescriber As per patient clinical conditions		Supplementary prescriber and independent prescriber 12 monthly			
Process for reporting ADRs: To IP and Yellow Card Scheme and note in medical record					
Shared record to be used by IP and SP: Practice Computer (and paper notes)					
Agreed by independent prescriber(s)	Date	Agreed supplementary prescriber(s)	Date	Date agreed with patient/carer	wit

Generic Clinical Management Plan (CMP) for Chronic Obstructive Airways Disease Drawn Up xxxxx, Pharmacist for xxxxxx Practice July 04

Date	
Name of patient	
Patient ID	
Patient medication Sensitivities	
Independent Prescriber	
Supplementary Prescriber	

Diagnosis: Chronic Obstructive Airway Disease (COPD)

Conditions to be treated

1. COPD – Symptom control.
2. Acute Infective exacerbation of COPD – (Must have had previous episode)
3. Health style – smoking cessation (if appropriate)
4. Mouth care – fungal infections, gingivitis

Medicines That May be Prescribed by Supplementary Prescriber

- ❖ Chapter 3 BNF,
- ❖ NICE COPD Guidelines (Feb 04)
- ❖ Antibiotics in line accordance with local policy
- ❖ NRT
- ❖ Authorised repeat medication, in line with BNF.

Aim of treatments:

- 1. COPD - symptom control**
 - In line with NICE COPD guidelines.
 - Prescribe within BNF licensed doses
 - Aim to control symptoms, in particular cough, dyspnoea, wheeze and sputum production.
 - Aim to maintain maximum FeV1 possible
- 2. Acute Infective exacerbation of COPD**
 - See local Antimicrobial Guidelines
 - Initiate antibiotics and monitor response
 - Consider oral steroids
 - Send Sputum sample for culture and sensitivity (if appropriate)

Sample CMP (2) - cont

3. Smoking Advice

- Advise patient on smoking
- Refer to practice stop smoking adviser (if appropriate)
- Prescribe NRT for patient on advice from smoking cessation adviser

4. Mouth Care – treat if necessary and advice

Treatment Plan:

- Review patient either; Monthly, 3 Monthly, 6 Monthly or annually as appropriate
- Measure and record - FEV1, peak flow, BP, weight and symptom assessment
- Measure FBC annually
- Review medication and make any necessary changes
- Review Inhaler technique at least annually
- Health Care advice – including smoking, diet (if appropriate)
- Ensure Influenza vaccine given annually (unless contra-indicated)
- Ensure pneumococcal vaccine has been given (unless contra-indicated)

Referral to Independent Prescriber

- Failure to tolerate medication.
- Significant deterioration in symptom control despite maximum therapy.
- Evidence of significant deterioration in respiratory function (Peak flow or FEV1) despite maximum therapy.
- Evidence of heart failure
- In case of infective exacerbation, failure to respond to antibiotics
- Significant or unexplained weight loss
- Haemoptysis
- Development of any new conditions, not previously listed
- Unstable control of other conditions.

Process for reporting ADRs:

Document in patients medical notes, yellow cards, refer back to IP

Documentation and Record Keeping:

Copy of management plan kept in patient's notes

Guidelines or Protocols supporting Clinical Management Plan:

BSNNG local Antimicrobial Guidelines relating to COPD

NICE COPD Guidelines (Feb 2004)

NICE Osteoporosis guidelines

British National Formulary (Current Edition)

Consent

SP signature	Date
IP signature	Date
Date agreed with patient	

Sample CMP (3)

Clinical Management Plan Template

Name of Patient: Hospital Number: Date of birth (patient sticker)		ALLERGIES	Start date	Review date
			Agreed by xxxxFRCP Independent prescriber	Agreed by: Signature
		Process for reporting ADRs: Using Yellow Card forms found at the back of the BNF	Shared record used by IP and SP: : Patients medical file	Date CMP agreed with patient
Condition(s) to be treated	Aim of treatment/ Indication	Guidelines or protocols supporting Clinical Management Plan (including details medicines which may be prescribed by supplementary prescriber,):	Restrictions/ limitations for use of medicines, specific indications for referral back to the IP, monitoring requirements	
Agitation in dementia	Symptom control	These guidelines must be strictly adhered to. http://www.rcpsych.ac.uk/college/faculty/oap/professional/guidance_summary.htm	Refer if agitation is not controlled within one hour of intramuscular treatment	
Anaemia – iron deficiency macrocytic	Restoration of normal FBC	Treat as per guidelines using products as per local formulary and/or BNF http://www.prodigy.nhs.uk/guidance.asp?gt=anaemia%20-%20iron%20deficiency http://www.prodigy.nhs.uk/guidance.asp?gt=Anaemia%20-%20macrocytic	Refer if dyspepsia occurs, Hb <10g/dl postmenopausal women, 11g/dl men, Refer if symptoms have not improved after one month of therapy or immediately if there is no obvious cause for anaemia.	
Angina – Stable	Symptom control	Nitrates, beta blockers see http://www.prodigy.nhs.uk/ClinicalGuidance/releasedguidance/GuidanceList.asp?specialityGuidanceList=2 November 2002 This guideline is intended for use in patients with stable angina who have a minor recurrence of symptoms	Refer for uncontrolled angina, despite guideline treatment, haemodynamic instability. Monitor on weekly visits as needed	
Anxiety	Short term symptom control	Diazepam 2.5-5mg tds orally may be used (bnf, SPC doses) where patient is agitated. http://www.prodigy.nhs.uk/guidance.asp?gt=Stress%20-%20acute%20reaction	Refer if agitation is not controlled following 5mg tds diazepam for one day.	
Asthma	Symptom control	Use guidelines in conjunction with latest BNF summary to control symptoms http://www.brit-thoracic.org.uk/sign/pdf/asthmafull.pdf http://www.prodigy.nhs.uk/guidance.asp?gt=Asthma	Refer according to BNF guidance.	
Atrial fibrillation	Rate control	Use guidelines to modify doses of existing drug treatment to main rate optimally between 65-85 bpm. http://www.prodigy.nhs.uk/guidance.asp?gt=Atrial%20fibrillation	Refer if rate persistently below 60 bpm or above 90 bpm or if other cardiac symptoms appear	
Benign prostatic hypertrophy	Control of urinary symptoms	Guidelines for diagnosed and treated patients to allow symptom control http://www.prodigy.nhs.uk/guidance.asp?gt=Prostate%20-%20benign%20hyperplasia#AlphaBlockers	Refer if symptoms worsen despite one modification of therapy or if acute change to patients condition	
Cellulitis	Resolution of infection	Use local microbiology guidelines to determine drug treatment. Use http://www.nlm.nih.gov/medlineplus/ency/article/000855.htm to support.	Refer if no improvement in 7-10 days or earlier if systemic symptoms appear	
Candida	Resolution of infection	Treat according to guidelines. Choice of antifungal treatment as per formulary and/or BNF. http://www.prodigy.nhs.uk/guidance.asp?gt=Candida%20-%20oral	Refer if symptoms persist after one week of treatment.	

Chest infection	Resolution of infection	Use prodigy guidelines in conjunction with local microbiology recommendations http://www.prodigy.nhs.uk/guidance.asp?gt=Chest%20infections	Refer if Co-morbid disease: cancer, heart failure, cerebrovascular disease, renal disease, or liver disease, New confusion' Low or high temperature (< 35 degrees or > = 40 degrees Celsius)' Raised respiratory rate (> 30/minute)', Tachycardia (> 125/minute) , Low blood pressure (systolic < 90 mm Hg or diastolic < 60 mm Hg) or if no improvement within 72 hrs.
Chronic Obstructive Pulmonary Disease	Symptom control	Assess symptoms according to guidelines using objective measurements where possible. http://www.goldcopd.com/revised_es.pdf	Refer if exacerbation does not resolve within 1-2 weeks, where respiratory function deteriorates despite treatment, or if signs of infections indicate deterioration.
Conjunctivitis - allergic, infective	Allergic – symptom control Infective – resolution of symptoms	Treat according to guidelines using BNF doses of appropriate medication http://www.prodigy.nhs.uk/guidance.asp?gt=Conjunctivitis%20-%20allergic http://www.prodigy.nhs.uk/guidance.asp?gt=Conjunctivitis%20-%20infective	Refer if no improvement within one week or if other symptoms appear
Constipation	Normal bowel function	http://www.prodigy.nhs.uk/guidance.asp?gt=Constipation 2002 updated Stimulant laxatives, faecal softeners, fibre, and others as per guideline.	Adverse change in bowel habit uncontrolled by therapy, bowel obstruction
Depression	Symptom control	e.g. SSRI's or TCA's as clinically appropriate, including consideration of previous use Revised April 2003 http://www.prodigy.nhs.uk/guidance.asp?gt=Depression	Continuing symptoms of depression despite 6 weeks of therapy and one dose increase. Refer immediately if symptoms worsen on treatment or if adverse effects occur. Monitor for suicidal ideation. Review need for treatment after six months.
Diarrhoea	Short term treatment of non infective diarrhoea	e.g. oral dehydration. Loperamide, codeine This guideline is intended only for use in patients who have a self limiting episode http://www.mydr.com.au/default.asp?Article=2228 (partner to healthinsite.gov.au)	Refer if diarrhoea continues for more than 5 days or if blood, pus or mucus appear in the stool. If patient becomes progressively unwell, refer immediately
Diverticulitis	Symptom control	Use guidelines for uncomplicated disease only. http://www.prodigy.nhs.uk/guidance.asp?gt=Diverticular%20disease	Refer if symptoms worsen despite treatment or if there is any evidence of infection
Dizziness	Symptom control	Summary of symptomatic treatment of menieres http://www.prodigy.nhs.uk/guidance.asp?gt=Meniere's%20disease http://www.gpnotebook.co.uk/simplepage.cfm?ID=261750850&linkID=35287&cook=yes	Refer if additional symptoms develop e.g. ear disorders, recurrent vomiting. Refer if head injury. Refer for adverse effects
Drug monitoring	To correctly monitor drug treatment	C:\Documents and Settings\dcarne\Desktop\supplementary prescribing\medication guidelines	Refer if tests outside reference ranges
Dry eyes	Relief of symptoms	Treat according to guidelines ensuring symptoms correspond.- http://www.prodigy.nhs.uk/guidance.asp?gt=Dry%20eye%20syndrome	Refer if symptoms do not resolve within one week or if other symptoms develop.
Dyspepsia	Symptom control	e.g. Antacids. PPI's H2 antagonists see: http://www.prodigy.nhs.uk/guidance.asp?gt=Dyspepsia%20-%20symptoms This guideline in intended for use in patients with existing oesophagitis, hiatus hernia, functional dyspepsia, patients with minor symptoms without existing disease and in whom endoscopy is deemed inappropriate.	Refer if epigastric pain is unresolved after two weeks despite therapy, GI bleeding, SP to monitor on weekly visits as needed

Eczema	Control of flare-up	Follow BNF doses of topical drug treatments http://www.prodigy.nhs.uk/guidance.asp?gt=Eczema%20-%20atopic http://emedicine.com/emerg/topic130.htm	Refer if lesions infected or symptoms worsen despite guideline treatment
Epilepsy	Prevention of seizure activity, control of seizures	This guideline allows modification of existing drug therapy according to plasma levels and adverse effects. Seizures should be managed with use of up to two doses of rectal diazepam (5mg after 2-5 minutes depending on respiratory status, 10mg after a further 10 minutes) as per local policy and according to guidelines and patient response. http://www.prodigy.nhs.uk/guidance.asp?gt=Epilepsy#Drug_Treatments	Refer immediately if seizures do not stop following two doses of diazepam over 15 minutes or if respiratory distress apparent. Refer if stable patient deteriorates or adverse effects suspected
Gout	Prevention and treatment of acute episode	e.g. NSAID, colchicine for acute attack, allopurinol for prevention This guideline must used together with non drug measures where possible Revised April 2002 http://www.prodigy.nhs.uk/guidance.asp?gt=Gout	Refer if more than three attacks per year or pain not resolved within four weeks
Haemorrhoids	Symptom control	Use guidelines to treat grade 1 and 2 only. http://www.prodigy.nhs.uk/guidance.asp?gt=Haemorrhoids	Refer if symptoms persist despite treatment for 7-10 days or if grade 3 or 4 haemorrhoids develop.
Heart Failure	Symptom Control	e.g. ACE inhibitors, diuretics, beta blockers, spironolactone, digoxin This guideline is intended for use in patients with previously diagnosed chronic heart failure who are experiencing an exacerbation of existing symptoms or additional minor symptoms Revised Feb 2004 http://www.prodigy.nhs.uk/guidance.asp?gt=Heart%20failure#Other_potentially_useful_drug_treatments	Refer if symptoms do not respond to guideline treatment, rapidly progress, adverse effect of treatment or if acute heart failure is suspected.
Hypersalivation	Symptom control	Treat with hyoscine patch first (licensed), then try either hyoscine or propantheline tablets (BNF doses) or dicyclanide, amitriptyline 10-50mg od, not for epileptics, care falls) or orphenadrine liquids, as per local guidelines. Use prodigy guidelines where possible (palliative care). Adhere to cautions/ contraindications in bnf - majority treatments unlicensed. http://www.prodigy.nhs.uk/guidance.asp?gt=Palliative%20care%20-%20secretions	Refer if adverse effects occur which are not controlled by switching therapy or reduction in dose. Refer immediately if urinary retention or vision abnormalities occur. Monitor for improvement within 2 weeks or starting therapy. If no improvement following local protocol or guidelines, refer.
Hypertension	Minimising risk of stroke/MI	e.g. ACE inhibitors, betablockers, calcium channel blockers, diuretics Modified March 2001 - guidelines for Older people http://www.sign.ac.uk/guidelines/fulltext/49/section5.html BMJ 2004;328:634-640 – update general http://bmj.bmjournals.com/cgi/content/full/328/7440/634	Refer if more than two additional drugs fail to control hypertension after 4-6 weeks. Refer adverse effects. Monitor blood pressure daily for four weeks if therapy changed, otherwise weekly or monthly as agreed with clinician
Hypokalaemia	Maintenance of levels within normal range	Oral potassium supplements as per BNF dosing. Use either Slow K (8mmol/tab) or Effervescent K (6.7mmol/tab) or Sando K (12mmol/tab).	Check serum potassium every three months. Refer if levels persist below normal range or patient symptomatic e.g. diarrhoea, vomiting, change in cardiac or renal condition or diuretic use.
Hypoparathyroidism	Symptom control	Calciferol 250mcg daily. Dose alteration as recommended by medical practitioner following blood levels or symptom changes http://www.niddk.nih.gov/health/endo/pubs/hyper/hyper.htm	Monitor calcium levels six monthly and as per guidelines
Hypothyroidism	Euthyroid status	Levothyroxine http://www.prodigy.nhs.uk/guidance.asp?gt=hypothyroidism	Return of symptoms despite dose escalation. Monitor TFTs annually or 2/12 after dose changes

Incontinence	Management of symptoms	http://www.npc.co.uk/MeReC_Bulletins/2000Volumes/pdfs/vol11n03.pdf	Refer for adverse effects or if symptoms uncontrolled with medication
Insomnia	To restore acceptable sleep pattern	e.g. benzodiazepines for short term use only, as with newer agents where possible http://www.prodigy.nhs.uk/guidance.asp?gt=Insomnia	Unresolved symptoms after 2 weeks, refer adverse effects
Insulin dependent diabetes	Management of diabetes and complications	These guidelines primarily should be used to manage short term symptoms with secondary emphasis on control of long term complications http://www.sign.ac.uk/pdf/sign55.pdf	Refer if BM's are persistently below 3mmol/l or above 15mmol/l. Refer immediately if hypoglycaemia or hyperglycaemia results in coma.
Irritable Bowel Syndrome	Symptom control	These guidelines should be used to aid control of exacerbations of IBS http://www.prodigy.nhs.uk/guidance.asp?gt=Irritable%20bowel%20syndrome	Refer if episode does not resolve within two weeks or earlier patient deteriorates.
Leg cramps	Symptom control	Quinine This guidance is for use in patients where non drug treatment has been ineffective. Updated April 2002 http://www.prodigy.nhs.uk/guidance.asp?gt=Leg%20cramps	Refer if leg cramps continue despite treatment, adverse effects or other symptoms occur
NIDDM	Keep BM's below 15mmol/l	Oral hypoglycaemic agents see http://www.sign.ac.uk/guidelines/published/index.html#Diabetes . November 2001 This guideline is intended for use in patients for whom long term prevention of complications of diabetes is secondary to day to day control of symptoms.	Persistent hypo or hyperglycaemia with or without symptoms Monitor BM's as appropriate for patient.
Nutritional supplementation	To maintain adequate vitamin and mineral intake	If patient is on a puree diet or is taking inadequate amounts and variety of food by mouth, but is not PEG fed, Abidec drops 14 drops per day may be prescribed as a supplement. Multivitamin tablets, 2 daily may be used with the wound care protocol medication as a vitamin supplement	Refer if patient deteriorates or if BMI falls to less than 19.5
Osteoarthritis	Symptom control	http://www.prodigy.nhs.uk/guidance.asp?gt=Osteoarthritis#MI_analgesia	Refer if symptoms worsen despite treatment, acute joint changes or other symptoms occur
Osteoporosis treatment and prevention	Prevention of fractures	e.g. calcium and vitamin D, bisphosphonates Revised Oct 2003 http://www.prodigy.nhs.uk/guidance.asp?gt=Osteoporosis%20treatment	Refer for adverse effects or if new fracture occurs (including unexplained back or limb pain)
Palliative care	Symptom control	http://www.prodigy.nhs.uk/ClinicalGuidance/relatedguidance/GuidanceList.asp?specialityGuidanceList=25 Consult Palliative Care Formulary 2nd edition (Book and CD-ROM package) <i>Robert Twycross, Andrew Wilcock, Sarah Charlesworth</i> Consult St Lukes Hospice guidelines	Refer according to guidelines or if patient and/or carers/relatives continue to be in distress despite guideline treatment.
Pain	Analgesia	Paracetamol, opiate/paracetamol combinations, NSAIDs, opiates. See guidelines August 2001 http://www.prodigy.nhs.uk/guidance.asp?gt=Osteoarthritis	Uncontrolled pain despite two changes in therapy
Pancreatic insufficiency	Symptom control	This guideline is intended to allow modification of existing therapy (pancreatic supplements) pancreatin http://emc.medicines.org.uk	Refer if dose modification does not resolve problem (steatorrhoea) or symptoms change
Parkinson's Disease	Symptom Control	This guideline should be used for modification of existing treatment e.g. dose, timings, formulation. http://www.prodigy.nhs.uk/guidance.asp?gt=Parkinson's%20disease	Refer if additional drug therapy is required despite modification of current medication. Refer if reassessment of condition is needed
Peripheral vascular disease	Antithrombotic treatment	http://bmj.bmjournals.com/cgi/content/full/325/7372/1101	Refer if local lesions deteriorate or pain increases.

Postural hypotension	Treatment	http://jnnp.bmjournals.com/cgi/content/full/65/3/285	Refer if bp is below 90/50 or if recurrent falls, dizziness do not resolve with treatment. Monitor drugs for adverse effects including U&E's with fludrocortisone (one week after dose changes)
Prophylaxis of myocardial infarction (MI)	Prevent further events	e.g. beta blockers, aspirin, statins http://www.prodigy.nhs.uk/guidance.asp?gt=Primary%20MI%20-%20prophylactic%20Rx#MI_No_HF_Which_Drugs Updated Dec 2002 This guideline is intended for use in patients for whom long term prevention of MI is secondary to day to day control of symptoms.	Refer all adverse effects and acute MI.
Psoriasis	Control of flare- ups	http://www.pharmj.com/pdf/hp/200207/hp_200207_therapeutic.pdf	Refer if lesions infected or symptoms worsen despite guideline treatment
Seborrhoeic dermatitis	Control of flare-ups	Use for management of scalp manifestation (topical treatments). http://www.prodigy.nhs.uk/guidance.asp?gt=Seborrhoeic%20dermatitis	Refer if symptoms persist after two weeks of topical treatment, skin deteriorates or if bleeding occurs from affected area bleeding occurs
Spasticity	Symptom control	Baclofen or diazepam may be used at BNF doses. Dantrolene and tizanidine should be initiated by the independent prescriber, with SP modifying doses. See BNF and http://www.gpnotebook.co.uk/simplepage.cfm?ID=1483079637&linkID=31272&cook=yes	Refer if adverse effects occur or if symptoms are not controlled with one drug at maximum tolerated dose.
Stroke prevention	Prophylaxis of further stroke/TIA	This guidelines should be used for prevention of further strokes after initial stroke or TIA. See page 40 of guideline (section 3.5) http://www.rcplondon.ac.uk/pubs/books/stroke/stroke_guidelines_2ed.pdf	Refer for adverse effects or if another cerebrovascular event occurs
Transient Ischaemic Attack (TIA)	Prevention of recurrence	e.g. aspirin, clopidogrel. For use in patients who have had at least one TIA Last revised feb 2004 http://www.prodigy.nhs.uk/guidance.asp?gt=TIA%20-%20not%20in%20AF	Refer if TIA's continue despite therapy or adverse effects to treatment
Urinary tract infections - women	Resolution of infection	Treat as per local guidelines (microbiology). http://www.prodigy.nhs.uk/guidance.asp?gt=UTI%20(lower)%20-%20women	Refer if symptoms do not resolve within 72 hours of if clinical signs and symptoms suggest deterioration sooner.
Vitamin B deficiency	To maintain adequate Vitamin B12 levels	Hydroxocobalamin injection 1mg every 3 months	Monitor haematology annually. If macrocytic anaemia recurs, refer to xxxx
Wound Care	Enhance wound healing	Use nursing protocol (tissue viability document) for all topical wound care. Zinc sulphate 220mg bdds with ascorbic acid 200-500mg may be use for 1-3 months to support topical treatments. Evidence is poor quality but treatment appears safe. Field CC. Overview of wound healing in a moist healing environment, Am J Surg. 1994; 167:2S-6S. Taylor TV, Rimmer S, Day B, et al. Ascorbic acid supplementation in the treatment of pressure-sores. Lancet. 1974;2:544-546. Hallbook T, Lanner E Serum-zinc and healing of venous leg ulcers. Lancet. 1972; 2:780-782. Houston S, Haggard J, Williford J, et al. Adverse effects of large-dose zinc supplementation in an institutionalized older population with pressure ulcers, J Am Geriatr Soc. 2001;49:1130-1131	Stop medication if no improvement after two months of treatment. Refer if wound deteriorates

Appendix 4: Observation of Patient Consultations

1. How does the pharmacist greet the patient e.g. by standing up, shaking hands?
2. Where do patient and pharmacist sit in relation to each other?
3. Do they make small talk at the beginning of the consultation?
4. Does the pharmacist appear comfortable?
5. Do the pharmacists appear knowledgeable and confident?
6. Does the patient appear comfortable?
7. Does the patient seem ready to ask questions?
8. Is the pharmacist able to answer the patient's questions?
9. If the patient asks a question the pharmacist cannot answer how does he/she deal with this?
10. Did you think the patient said all they had come to say?
11. Did you feel the patient was holding back information?
12. Did the pharmacist realise this?
13. Did they follow patients' cues?
14. Does the patient seem to accept the advice the pharmacist gives?
15. Does the pharmacist involve the patient in the decision making process?
16. Did the pharmacist refer to the computer/patient's notes/ CMP before the session?
17. Did the pharmacist refer to the computer/patient's notes/ CMP during the session?
18. What did you notice most about the consultation?
19. How did the pharmacist close the consultation?
Did he/she appear to find the closure difficult?

Appendix 5: Case Study Participants

Pharmacists who declined:

1. Participant A

A PCT pharmacy advisor working one day a week in a multi-ethnic GP practice. Chosen for the diversity of her roles and because she had found difficulty working with patients from different ethnic backgrounds, due to language and cultural barriers.

Initially agreed to take part but on consideration felt that her workload was too heavy and so declined.

2. Participant B

Working for 2 GP practices as pharmacy advisor and conducting clinics in both practices. Also has a teaching role on his local supplementary prescribing course. Agreed to take part and the case study was arranged with interviews set up and paperwork done. Unfortunately, he had to pull out at the last minute as the GP practice where the study was to take place took on a locum GP and gave the pharmacist's consulting room to the GP. This left the pharmacist with only a small room in which to carry out his clinics and although he expressed a wish to carry on with the case study regardless, his GPs withdrew their support for it.

3. Participant C

A hospital pharmacist working in a large London teaching hospital and prescribing for a local nursing home. She felt that her setting was inappropriate as a case study site as the patients were mostly elderly and mentally and physically frail.

4. Participant D

A pharmacist working in primary care as a supplementary prescriber, and in the PCT as a pharmacy advisor. She declined to take part as she obtained a new job with the PCT carrying out prescribing research, and was no longer in a supplementary prescribing role.

5. Participant E

A hospital pharmacist who had only just begun to prescribe and chosen for this reason. She declined as she felt she had not been prescribing for long enough and would find a case study difficult in terms of the extra workload.

6. Participant F

A pharmacist working in hospice care. Declined as she felt her patients were too vulnerable and the hospice setting would be inappropriate.

7. Participant G

Community pharmacist running his retail pharmacy, and attempting to set up as a supplementary prescriber within that pharmacy. He had computer links with a local GP

practice, and patients were being referred from there to his practice for repeat prescriptions. He felt that it was too early in the setting up of his supplementary prescribing role, and that he was not seeing enough patients yet. However, this participant agreed to take part in the diary study.

Pharmacists who agreed:

1. Case Study 1

The first case study was carried out with a hospital pharmacist working in a specialist area (e.g. renal, liver, critical care, paediatric medicine). He had been a hospital pharmacist for 16 years (since qualifying), had worked in a variety of hospitals and specialties and his current post was as Deputy Chief Pharmacist. He also had a teaching role at the local university. This site was chosen as it was an example of the diversity of pharmacy prescribing practice, in that the pharmacist had a specialist clinical interest and also had a management role within his department. He had built up relationships within the medical and nursing team and believed that it was each pharmacist's responsibility to promote innovations in pharmacy practice which would ultimately improve patient care. He had done this himself by working with the consultants to devise a method of improving the administration of medicines within the specialist area. However, some clinical governance issues arose during the first phase interview with this pharmacist regarding the implementation of clinical management plans, which appeared to be contrary to recommended practice, and thus were investigated further during the case study.

2. Case Study 2

The second case study was carried out with an independent community pharmacist prescribing for a GP practice. He had had an association with the practice for many years and had eventually moved into the GP practice, having a pharmacy in a separate part of the building. He had been a community pharmacist since qualifying 15 years previously and specialised in prescribing for elderly care, coronary heart disease and gastro-intestinal disorders. This site was chosen as it was an example of how community pharmacists can work with GPs within the bounds of good supplementary prescribing practice. However, again certain clinical governance and confidentiality issues arose in the first interview, which were explored during the case study.

3. Case Study 3

Case study three was carried out with a pharmacist working full time in a GP practice. She had been a pharmacist for 15 years, initially as a PCT pharmacy advisor who developed links with the GPs with whom she now works, which ultimately lead to her negotiating a partnership. She prescribed in a number of areas including hypertension and diabetes in which she conducted clinics in collaboration with the practice nursing staff. This site was chosen for its uniqueness and as an example of a pharmacist taking on a quasi-GP role. A number of issues, including blurring of the GP/pharmacist role and diagnosing medical conditions were explored during the case study.

4. Case Study 4

Case study 4 was carried out with a hospital pharmacist specialising in the monitoring of one particular drug therapy. She had worked in the hospital setting for 30 years in a

variety of specialties and had been in her current role as Chief Clinical Pharmacist for 13 years. This pharmacist worked closely with a consultant and had taken over the dosing of patients on this medication 8 years ago. Many of the patients under her care had previously been managed by the consultant and so it was possible for comparisons to be made by those patients, of their care past and present. Again, a number of clinical governance issues, particularly concerning shared care, arose which were explored further during the study.

5. Case Study 5

This pharmacist's primary role is as a pharmacy advisor to a PCT but who carries out asthma clinics for a GP practice, one session a week. This site was chosen as an exemplar of the role carried out by a number of the pharmacists interviewed during phase 1. This pharmacist is well-supported by a forward-thinking practice including a nurse practitioner who is herself a supplementary and independent prescriber, and is extremely experienced. This pharmacist is keen to extend her role to another beyond asthma care, and will probably work with hypertension patients as well. The main problem is securing funding to extend prescribing her role. She is currently paid by the PCT. She feels that she needs to see a greater number of patients in order to develop her clinical skills, and give her greater confidence in her role.

Appendix 6: Patient Advisory Group – Communication Issues

At the penultimate meeting of the group the participants discussed some of the communication / accountability issues at the hospital-primary care interface when an additional prescriber is added.

Communication issues at the primary care – hospital interface were discussed and a number of problems with communication were raised (most based upon the patients' previous experiences):

- If you increase the number of people prescribing (or offering treatment), you increase the risk of poor communication
- Patients should receive copies of the letter from the hospital to the GP, but frequently do not.
- Patients may think the doctor / nurse / pharmacist has got it wrong – but may not challenge them on this.
- Communication between hospitals (e.g. hospital to hospital transfers) can be quite poor.
- Patients have experienced difficulty in obtaining treatment / follow up care – particularly if they have been seen out of the area (e.g. no funding is available for subsequent follow-up)
- Consultant letters can take a long time to reach the GP (approximately 2 months although this has improved recently)
- Systems for communication need to be improved – particularly for those who seek treatment while on holiday, when commuting to London and so on.
- Referral letters from GPs to hospital can be incomplete but if patients don't see them, they don't realise this.
- Patients frequently are unaware of how the system works (or what their medicines are) and this means they do not know what to ask

Possible Solutions to primary care – hospital Interface communication (multiple prescriber) issues:

- More informed patients. Patients could demand to see GP letters / other communication to see if it is correct but might worry they would be challenged. This also raises the questions (1) should patients have to do this? (2) are all patients able / capable to do this?
- Systems of communication need to be established first – before pharmacists start prescribing so that the possible pitfalls in the communication system are thought of first.
- The opening brief is very important – that is, the initial approach from the GP to the patient to see if they are happy to see a pharmacist should outline what the patient should do if things go wrong (with the pharmacist or with communication in general).
- The overall system for communication should be decided (and supported) at a higher level within the management structure.
- Protocols for the systems of communication should be decided at the beginning.
- While GPs are currently the centre for coordinating communication around a patient's treatment, patients frequently see more than one GP. There should be (communication) systems which allow for patients to be seen by more than one GP. The systems should put the patient at the centre of patient care.