

# **Patients and Their Use of Medicines: A Discourse Analysis of Encounters with Nurse Prescribers**

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## ABSTRACT

Patients' use of medicines is widely recognised as sub-optimal with a high proportion of patients with a long-term condition not taking their medicines as prescribed. Research and policy guidance emphasise the importance of partnership within the patient-prescriber encounter in enhancing patients' use of medicines. There is however considerable evidence that this is not usually achieved by medical prescribers, limiting the extent to which shared decision-making occurs about prescribed medicines. There is a general assumption that nurse prescribers, who within the United Kingdom have comparable prescribing rights to medical doctors, demonstrate greater abilities in collaborative working with patients leading to an enhanced use of medicines. Research evidence is however limited, particularly in relation to the ways in which patients' use of medicines is discussed and negotiated within the patient-nurse prescriber encounter.

This study focused on the management of patients' use of medicines within the patient-nurse prescriber encounter. Seven nurse prescribers, working within a number of clinical specialities in both primary and secondary care settings, were recruited to the study together with their patients who were living with one or more long-term conditions (n=21). Data collection involved the non-participant observation of out-patient consultations to examine the management of patients' use of medicines within the encounter and semi-structured interviews with both patients and prescribers. Discourse analysis was undertaken to examine underpinning assumptions, views and beliefs regarding the management of patients' use of medicines. Asymmetry was evident within the encounters with prescribers controlling the agenda for discussion and interrupting patients' attempts to demonstrate their knowledge. Patient accounts of the moral approach adopted in managing their condition in the context of their everyday lives were also ignored. Biomedical and contrasting moral discourses are examined.

An interpretive framework derived from the work of Michel Foucault is used to explain the operation of disciplinary, pastoral and bio-political power within the encounter and the extent to which subjugation of patients' knowledge and resistance were evident. Foucault's concept of technologies of the self is examined to explore its potential application in enhancing patients' medicines use.

## **DEDICATION**

This submission is dedicated to the memory of my parents, Chrissie and Emil Hoffmann, who were always supportive and proud of my efforts and who were sadly not able to see its completion.

## **ACKNOWLEDGEMENTS**

I would like to thank firstly the patients and nurse prescribers who gave so willingly of their time and without whom there would be no study.

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## Glossary of terms

**District nurses:** Provide nursing care to people in their own homes or in residential care homes and support family members. They play a vital role in keeping hospital admissions and readmissions to a minimum and ensuring that patients can return to their own homes as soon as possible.

<http://www.nhscareers.nhs.uk/explore-by-career/nursing/careers-in-nursing/district-nursing/>

**Dosette box:** A commercial version of a multi-compartment compliance aid (see below)

**Health visitors:** A registered nurse or midwife who has undertaken further training in child health, health promotion, public health and education in order to be able to promote health and wellbeing and prevent illness working within a community setting, visiting people in their own homes. It primarily involves supporting new parents and pre-school children.

[http://www.healthvisiting.org.uk/what\\_is\\_a\\_health\\_visitor/](http://www.healthvisiting.org.uk/what_is_a_health_visitor/)

**Independent prescribing:** The independent prescriber (doctor, dentist, nurse or pharmacist) takes responsibility for the clinical assessment of the patient, establishing a diagnosis and the clinical management required, as well as responsibility for prescribing where necessary and the appropriateness of any prescription (DoH 2006).

**Insulin Dose Adjustment Course:** An intensive, structured education programme offered to patients with type 1 diabetes. It facilitates their ability to self-manage their condition via multiple daily injections and carbohydrate counting so that it has the minimum impact on their lifestyle. <http://www.patient.co.uk/doctor/diabetes-education-and-self-management-programmes>

**Licensed and unlicensed medications:** Medicines in the UK are governed by strict checks and guidelines to make sure they are safe and effective. Once all the required safeguards are satisfied, following extensive clinical trials, the medicine receives a marketing authorisation (a product licence) from the Medicines and Healthcare products Regulatory Agency (MHRA). The medicine can then be prescribed for the specific indication granted in its product licence. An unlicensed medicine is any medicine that does not have a UK marketing authorisation and may be prescribed when, in the clinician's judgement, the patient's needs cannot be met through use of a licensed medication. Since 2006 nurse and pharmacists prescribers have been able to prescribe licensed medicines independently and unlicensed medicines since 2010.

**Medical conditions:** (Unless otherwise stated information was retrieved from: <http://www.nhs.uk/conditions>)

**Angina:** Chest pain that occurs when the blood supply to the muscles of the heart is restricted.

**Anxiety:** a feeling of unease, such as worry or fear that can be mild or severe.

**Asthma:** a common long-term condition that can cause a cough, wheezing, and breathlessness. The severity of the symptoms varies from person to person.

**Bronchiectasis:** a long-term condition where the airways of the lungs become abnormally widened, leading to a build-up of excess mucus that can make the lungs more vulnerable to infection.

**Chronic kidney disease (CKD):** a long-term, progressive condition where the kidneys do not work effectively leading to difficulties with the patient's blood pressure, control of blood chemistry levels and production of red blood cells. For some people CKD may progress to kidney failure where the kidney does not carry out its usual functions and renal dialysis is required.

**Chronic Obstructive Pulmonary Disease (COPD):** a collection of lung diseases including chronic bronchitis, emphysema and chronic obstructive airways disease, involving difficulties breathing, a persistent cough with phlegm and frequent chest infections.

**Deep venous thrombosis:** a blood clot which forms in a deep vein, usually in the leg. It can cause pain and swelling in the leg and may lead to complications such as a pulmonary embolism in the lung, which can be fatal.

**Depression:** a feeling of persistent sadness, lasting weeks or months. Can cause a variety of symptoms, including feelings of sadness and hopelessness and losing interest in the things normally enjoyed and may also cause physical symptoms.

**Glaucoma:** a group of eye conditions that lead to raised pressure within the eye and affect vision.

**Heart attack:** a serious medical emergency in which the supply of blood to the heart is suddenly blocked, usually by a blood clot, which may seriously damage the heart muscle.

**Heart failure:** a serious condition caused by the heart failing to pump enough blood around the body at the right pressure, leading to breathlessness, and an increase in fluid in the lower leg (oedema).

**Hypertension:** high blood pressure which may have no obvious symptoms but, if left untreated, increases the risk of a heart attack or stroke.

**Intermittent claudication:** pain in the leg brought on by walking, caused by poor blood flow to the muscles due to hardening of the arteries. The pain is relieved by rest.

**Lung fibrosis:** a group of diseases which produce interstitial lung damage and ultimately fibrosis and loss of the elasticity of the lungs. Characterised by shortness of breath, the condition may be caused by previous lung damage due to e.g. tuberculosis or radiotherapy or it may be idiopathic and have no known cause (from: <http://www.patient.co.uk/doctor/pulmonary-fibrosis>)

**Osteoarthritis:** a condition that affects the joints, leading to pain, stiffness and difficulty doing every day activities.

**Osteoporosis:** condition that weakens bones, making them fragile and more likely to break. Fractures of the vertebrae (bones in the spine), wrist and hips are the most common type of breaks.

**Sleep apnoea:** a condition where the walls of the throat relax and narrow during sleep, interrupting normal breathing and leading to severely disturbed sleep together with an increased risk of high blood pressure, heart attack or stroke.

**Temporal arteritis:** a condition in which medium and large arteries, usually in the head and neck, become inflamed, leading to severe headache, pain in the jaw or loss of vision.

**Type 1 diabetes:** a condition in which the pancreas does not produce any insulin leading to high blood glucose levels and ultimately serious damage to the body's organs. It often develops before the age of 40, usually during the teenage years and must be controlled by life-long injections of insulin.

**Type 2 diabetes:** A condition which is much more common than type 1 diabetes and occurs when the body doesn't produce enough insulin to function properly or the body's cells don't react to insulin. Occurs within the older age group and is often associated with obesity and a sedentary lifestyle.

**Medicines:** (unless otherwise stated medicines information was retrieved from <http://www.nhs.uk/medicine-guides/pages/default.aspx>)

*Alendronic acid:* used in treating osteoporosis and preventing osteoporosis.

*Amitriptyline:* used to treat depression. Can also be used to treat nerve pain, although this is an unlicensed use

*Amlodipine:* used in hypertension (high blood pressure) and angina

*Aranesp:* a form of a hormone called erythropoietin. Produced in the kidneys, erythropoietin is involved in the production of red blood cells. Aranesp is used to treat anaemia in people who do not produce enough erythropoietin as in people who have kidney problems. Must be injected and is usually self-injected by the patient

*Aspirin:* used in unstable angina, prevention of a stroke, cerebral transient ischaemic attacks and prevention of a heart attack

*Atorvastatin:* used in people with high cholesterol levels to reduce the chances of a heart attack or stroke

*Atrovent inhaler:* used in asthma and chronic obstructive pulmonary disease to relax the air passages of the lungs, making it easier to breathe

*Bendroflumethiazide:* used in hypertension and oedema

*Bisoprolol:* used to help treat heart failure and may also reduce the heart rate and help the heart to beat more regularly

*Bricanyl inhaler:* used to relax muscles in the air passages of the lungs, helping to keep the airways open and make it easier to breathe

*Calcichew:* used as a phosphate binder in people who have high levels of phosphates in their blood and are undergoing kidney dialysis

*Calcitriol:* a type of vitamin D, used to treat post-menopausal osteoporosis or osteodystrophy, a defective ossification of bone associated with disturbed calcium and phosphorus metabolism in people with renal problems

*Carbocisteine:* used in the treatment of excessive viscous mucus and works by reducing the thickness and stickiness of sputum

*Champix*: Brand name of Varenicline tartrate, which is used to help people who want to stop smoking. It can help to reduce withdrawal symptoms and craving after stopping smoking

*Ciprofloxacin*: an antibiotic used to treat certain forms of bacterial infection

*Co-Amoxiclav*: an antibiotic containing two medicines, amoxicillin trihydrate and clavulanic acid. They work together to treat certain forms of bacterial infection.

*Contraceptive pill*: used to prevent pregnancy

*Co-trimoxazole*: an antibiotic which contains two medicines, sulfamethoxazole and trimethoprim which work together to kill certain types of bacteria.

*Creon*: Brand name for Amylase/Lipase/Protease, which is used to replace enzymes in the body needed to digest food and which are normally produced by the pancreas. Required following removal of the pancreas or in patients with cystic fibrosis

*Diltiazem*: used to maintain blood flow to the heart and reduce the frequency and severity of angina attacks, also reduces blood pressure

*Domperidone*: used in patients with gastrointestinal reflux, a common cause of chronic cough (from Fontana & Pistelesi (2003) retrieved 26 August 2014 from: <http://thorax.bmjjournals.org/content/58/12/1092.full.pdf>)

*Dosulepin*: a generic form of Prothiopine, a tricyclic antidepressant

*Doxycycline*: used in certain types of bacterial infections

*EMLA cream*: a brand name for Prilocaine/Lidocaine used to stop the feeling of pain before carrying out certain procedures on the skin e.g. insertion of renal dialysis cannula

*Erythromycin*: an antibiotic used to treat certain types of bacterial infections

*Fentanyl patches*: an opioid analgesic used to treat severe pain. Administered via a patch applied to the skin (from: <http://www.patient.co.uk/medicine/Fentanyl.htm>)

*Folic acid*: used in the treatment of anaemia

*Fostair*: Brand name for Beclometasone dipropionate/Formoterol fumarate dihydrate which contains two medicines to help reduce inflammation and relax the air passages in the lungs and make breathing easier

*Furosemide*: used in hypertension and oedema and helps to remove fluid from the body by increasing the amount of urine that is produced

*Gentamicin*: an antibiotic used to treat a number of bacterial infections such as chest infections, urinary tract infections or septicaemia. Can be administered via a number of routes including by nebuliser when it is inhaled directly into the lungs

*Gliclazide*: used in the treatment of Type 2 diabetes

*Glucagen*: raises the level of sugar in the blood. It is used to treat very low blood sugar levels when sugar cannot be taken by mouth and must be injected by e.g. a family member or other responsible person

*Insulin injections:* used as a substitute for the body's insulin in people with diabetes. They help the body to use the sugar in the blood properly and to prevent the blood sugar level from becoming too high. Always used in the treatment of Type 1 diabetes and can also be used in patients with Type 2 diabetes. Several forms of insulin are available, all of which must be injected. NPH insulin is one category of insulin, an intermediate-acting one often used in conjunction with short-acting insulin. Humulin I is the brand name for intermediate-acting insulin. Humalog is the brand name for short-acting insulin

*Iron:* used in iron-deficiency anaemia

*Lansoprazole:* used to treat a number of gastro-intestinal conditions e.g. stomach ulcers and to relieve heartburn and indigestion. It works by reducing the amount of acid in the stomach

*Lanthanum:* used in treating high phosphate levels in the blood and works by stopping phosphate being absorbed from food into the body

*Lisinopril:* has many effects on the heart and circulation and is used in hypertension, heart failure, preventing complications after a heart attack and treating kidney problems in people with diabetes

*Losartan:* used in hypertension, heart failure, preventing further kidney problems in people with diabetes and reducing the chances of a heart attack or stroke in people who have heart disease

*Lumigan eye drops:* Brand name of Bimatoprost, used in conditions such as ocular hypertension or open-angle glaucoma where there is increased pressure inside the eye

*Metformin:* used in the treatment of type 2 diabetes

*Moxonidine:* used in hypertension

*Nasacort nasal spray:* Brand name of triamcinolone nasal spray used to treat allergic symptoms such as a blocked nose or sneezing. (From: <http://www.patient.co.uk/triamcinolone-nasal-spray-nasacort>)

*Nicorandil:* helps to maintain the blood flow to the heart and is used to prevent angina pain from occurring

*Omeprazole:* used to treat stomach ulcers and to relieve heartburn and indigestion and works by reducing the amount of acid in the stomach

*Phyllocontin:* brand name of aminophylline, which is used in the treatment of reversible airways obstruction

*Prednisolone:* a corticosteroid which works by preventing or reducing inflammation. It is used to treat a number of conditions that are characterised by excessive inflammation e.g. acute exacerbations of an underlying respiratory condition

*Provera:* brand name of Medroxyprogesterone acetate, a hormone which is similar to the naturally-produced hormone progesterone. Used for the treatment of endometriosis and menstrual conditions

*Quinine:* used for severe leg cramps at night (Retrieved 12 August 2014 from <http://www.patient.co.uk/medicine/Quinine.htm>)

*Ramipril*: has many effects on the heart and circulation and is used in the treatment of hypertension, heart failure, treating kidney problems and preventing heart and circulation problems in patients at risk

*Salbutamol*: relaxes the air passages of the lungs. It helps to keep the airways open, making it easier to breathe and is used in asthma, bronchospasm and bronchitis. Can be used via an inhaler or nebuliser

*Seretide*: contains two medicines, fluticasone and salmeterol, which help reduce inflammation and relax the air passages in the lungs to make it easier to breathe. Used in asthma and chronic obstructive pulmonary disease

*Sevelamer*: a phosphate binder used in treating high phosphate levels in the blood

*Simvastatin*: reduces the amount of cholesterol produced in the body and is used in reducing the chances of a heart attack or stroke in people who have heart disease, dyslipidaemia or diabetes

*Sodium bicarbonate solution (taken orally)*: Can be used to treat raised blood acid levels caused by kidney disease although this is not a common use

*Spiriva inhaler*: Brand name of tiotropium, which relaxes the airways, making it easier to breathe and is used in chronic obstructive pulmonary disease

*Spironolactone*: helps to remove fluid from the body by increasing urine production and is used in the treatment of heart failure, excess fluid in the abdominal cavity and liver cirrhosis

*Sterimar nasal spray*: contains hypertonic sea water and is used to relieve a blocked nose, for example due to sinusitis or allergies

*Symbicort inhaler*: contains two medicines, budesonide and Formoterol, which reduce inflammation and relax the air passages in the lungs, making it easier to breathe. Used in asthma and chronic obstructive pulmonary disease

*Tiotropium inhaler*: relaxes the airways, making it easier to breathe and is used in chronic obstructive pulmonary disease

*Ventolin*: Brand name of salbutamol, which relaxes the air passages of the lungs. It helps to keep the airways open, making it easier to breathe and is used in asthma, bronchospasm and bronchitis. Can be used via an inhaler or nebuliser

*Zopiclone*: used to treat sleeping problems

**Multi-compartment compliance aid (MCA)**: ‘a repackaging system for solid dosage form medicines, such as tablets and capsules, where the medicines are removed from manufacturer’s original packaging and repackaged into the MCA... would include repackaging systems such as monitored dosage systems (MDS) and daily dose reminders. ... MCA exist as both sealed and unsealed systems and cassette (where several medicines can be in one compartment) or blister (where there is only one dose of a medication in each compartment) systems’ (RPS 2013a:5)

**Physician’s Assistant**: Now known as Physician’s Associate, this is a developing role defined as one involving a ‘healthcare professional who, while not a doctor, works to the medical model, with the attitudes, skills and knowledge base to deliver holistic care and treatment within the general medical and/or general practice team

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under defined levels of supervision' (Physician Associate Managed Voluntary Register 2012) Retrieved 14 August 2014 from: <http://pamvr.org.uk/faqs/index.html>

**Polypharmacy:** 'The concurrent use of multiple medication items by one individual' (Duerden et al 2013:1)

**Pulmonary rehabilitation:** A programme, lasting several weeks, which offers patient education, exercise training, psychosocial support and advice on nutrition. Has been shown to improve exercise capacity, reduce breathlessness, improve health-related quality of life and decrease healthcare utilisation in those with COPD (Retrieved 14 August 2014 from: <http://www.patient.co.uk/doctor/pulmonary-rehabilitation> )

**Spacer:** A large plastic or metal container, with a mouthpiece at one end and a hole for the aerosol inhaler at the other. They make aerosol inhalers easier to use and more effective and enable more medicine to be delivered in the lungs than when using the inhaler alone (Retrieved 14 August 2014 from: <http://www.asthma.org.uk/knowledge-bank-treatment-and-medicines-spacers> )

**Supplementary prescribing:** A voluntary prescribing partnership between an independent prescriber (doctor or dentist) and a supplementary prescriber (nurse, pharmacist, physiotherapist, radiographer or podiatrist), to implement an agreed patient-specific clinical management plan with the patient's agreement (DoH 2006b)

## CHAPTER 1: INTRODUCTION

The principal focus of this study is patients' use of prescribed medicines and the ways in which non-medical prescribers work with patients to support their use of medicines during a prescribing consultation. Non-medical prescriber is used here and in the literature as a general term to refer to the different professional groups that, whilst not medically qualified, are currently legally empowered to prescribe medicines in the United Kingdom on successful completion of the non-medical prescribing programme. Personal interest in this area developed from the response consistently demonstrated by students studying to become non-medical prescribers when issues associated with patients' use of medicines were explored within the curriculum. In my role as a university lecturer responsible for the delivery of the programme it was interesting to note that, whenever patients' use of medicines was discussed, students were receptive to literature suggesting that medical practitioners were dominant in the prescribing consultation but strongly rejected any suggestion that the same findings might pertain within consultations in their own discipline. All student groups argued that they held much less power than doctors and they were able to communicate more effectively with patients.

The study's focus on patients' use of medicines is further justified below through consideration of the extent to which prescribed medicines are used by a high proportion of the population and the evidence which suggests that medicines are not necessarily taken as prescribed, particularly by patients with a long-term condition. The significant consequences for the individual, the National Health Service and broader society are examined.

The role of the non-medical prescriber is introduced and their increasing involvement in prescribing for patients with a long-term condition is outlined and the need is identified for further in-depth examination of the way in which the patients' use of medicines is managed within the encounter. When planning the study in 2009, nurse and pharmacist prescribers were more likely to be involved in the management of such patients due to the prescribing legislation in place at that time and recruitment of such prescribers to the study was therefore sought. As noted later in this chapter, the recruitment of pharmacist prescribers was not however possible and the study therefore became focused on the role of nurse prescribers in managing patients' use of medicines. The chapter concludes with an overview of the structure of the submission.

### **1.1 The nature and significance of patients' use of prescribed medicines**

Prescribed medication is the most common intervention across all sectors of the health service with over £8 billion spent per year on prescribed medicines in community settings in England in 2012 (Health & Social Care Information Centre (HSCIC) 2013a). A national survey in England in 2012 showed that around half of the population were taking at least one prescribed medicine per day (HSCIC 2013b) although it is likely that medicines' use is more extensive since the survey did not investigate the use of products bought from the pharmacy (Chaplin 2015). As the age of the population increases, it is likely that expenditure on medicines will increase significantly (National Audit Office 2007). The use of medicines is particularly widespread in the management of long-term conditions, which are defined as those conditions that cannot be cured, but which can be controlled by medication and other therapies (Department of Health (DoH) 2012a). In other countries and in the research literature such conditions are often described as chronic or non-communicable (World Health Organisation (WHO) 2011) although the long-term descriptor is used in the current study as it reflects the terminology within health policies in the United Kingdom (DoH 2012a). Long-term conditions are the leading cause of death in the world with the majority of deaths attributed to cardiovascular disease, diabetes, cancers and respiratory disease (WHO 2011). It is widely recognised that, in long-term conditions particularly, approximately half of all medicines are not taken as prescribed, despite being the most effective treatment (WHO 2003). The problem is so significant that it is suggested that effective interventions to enhance patients' use of medicines would have a greater impact on population health than any improvement in specific treatments (McDonald et al 2002, Horne et al 2005, WHO 2003).

The extent to which medicines are not taken as prescribed is an area which has attracted significant interest from policy-makers, researchers and practitioners. The area is characterised by considerable debate regarding its conceptual nature, measurement and the ways in which it should be studied and managed. There is however agreement that the issue involves considerable personal and societal costs (WHO 2003) through greater morbidity and increased hospital admissions. Although it is difficult to estimate the potential personal costs involved in the sub-optimal management of a patient's condition due to the incorrect use of prescribed medicines such costs are likely to be significant (Nunes et al 2009). It is estimated that there are major costs to society through the sub-optimal use of medicines. In the United Kingdom, for example, a 'cautious estimate' suggests that

approximately £100 million per year is wasted, in primary care settings, on medication that is dispensed but is later returned to the pharmacy (National Audit Office 2007:26). This figure is however likely to be a significant under-estimate of the true costs of patients' inappropriate use of medicines since it does not include those incurred through medicines dispensed, but wasted in the home. Economic modelling of the savings that might be achieved from even modest increases in patients' use of medicines for six common conditions such as diabetes and hypertension suggested that, potentially, in excess of £100 million per year could be saved per condition (York Health Economics Consortium/School of Pharmacy, University of London 2010).

## **1.2 Enhancing patients' use of medicines**

A significant number of studies have examined the effectiveness of a range of interventions in facilitating patients' adherence to their medication regime, including behavioural measures, educational approaches and social support (Christensen 2004). Most interventions however are very complex and demonstrate a small and short-lived influence on patient adherence (van Dulmen et al 2007, Haynes et al 2008, Nieuwlaat et al 2014, Vermeire et al 2001). The adherence literature can however be criticised on a methodological basis and for its emphasis on the professional agenda with minimal consideration given to patient beliefs and preferences (Horne and Weinman 2004, Latter et al 2007a). A restricted focus on patient behaviour only is also evident which limits understanding of the patient's experience of taking medicines for a long-term condition, since it ignores the complexity of issues that such patients face in managing their daily lives alongside their medication regime. Patients' use of medicines is the preferred term within the qualitative literature since it enables a focus on the many issues involved in patients' medicine-taking rather than measures of patient behaviour alone (e.g. McCoy 2009). The term is also used within this study to enable a broader consideration of the complexities of the patients' use of medicines for a long-term condition.

The encounter between a patient and the prescriber is often considered to be the primary influence on the patient's use of medicines (Dieppe et al 2002, Horne et al 2005, Van Dijk et al 2007) although there is little direct examination of the ways in which support and information should be provided, with a lack of observational research (van Dulmen 2010). The importance of the encounter is also emphasised in United Kingdom guidance about the facilitation of patients' use of prescribed

medicines. Prescribing, the guidelines suggest, is a complex process, based on partnership and agreement between the prescriber and patient within an encounter and should recognise the extent to which individuals wish to be involved in decision making (Nunes et al 2009). Studies of healthcare professionals' communication with patients about medicines have however shown that practitioners generally demonstrated a paternalistic approach to communication in which there was limited exchange of views about medicines or strategies to encourage patient participation in decision-making (Cox et al 2004).

There is however an almost exclusive focus on doctors as prescribers within the literature, despite the growing number of non-medical prescribers such as nurses and pharmacists (Latter et al 2007b). Introduced as part of the government's modernisation agenda (Offredy et al 2008), the non-medical prescribing role has undergone significant development enabling nurses and pharmacists to assume an independent role in the management of long-term conditions (Department of Health (DoH) 2006a, Fittock 2010). It is generally assumed that nurse and pharmacist prescribers enhance patients' use of medicines (DoH 2009). Research evidence of this is however limited.

Whilst there is a growing body of research evidence relating to non-medical prescribing there is however limited exploration of the processes of managing medicines or other complexities within the non-medical prescribing encounter (Latter et al 2007a, Offredy et al 2008) and there are few studies involving direct observation of the encounter. Further research is therefore required to examine the way in which nurse and pharmacist prescribers work with patients regarding their use of medicines. This study therefore originally set out to examine the research question and aims/objectives outlined in figure 1.1 below:

Figure 1.1 Research question and research aims/objectives

<b>Research question</b>
<b>How do patients and nurse/pharmacist prescribers manage the prescribing encounter in relation to the use of medicines for a long-term condition?</b>
<b>Research aims</b>
<ol style="list-style-type: none"> <li>1. To undertake an in-depth qualitative analysis of the understandings of medicines use held by patients and nurse/pharmacist prescribers.</li> <li>2. To examine the nature of the discussion about a patient's use of medicines that occurs within a prescribing consultation</li> </ol>
<b>Research objectives</b>
<ol style="list-style-type: none"> <li>i. To examine the nature of the discussion about the patient's use of medicines that occurs in a consultation with a nurse/pharmacist prescriber</li> <li>i. To examine the patient's views about the discussion about using medicines that occurs in a consultation with a nurse/pharmacist prescriber</li> <li>ii. To examine patient and nurse/pharmacist prescribers' views of the factors influencing patients' use of medicines</li> <li>iii. To understand patient and nurse/pharmacist prescribers' views of the ways in which patients' medicines use can be enhanced</li> <li>iv. To explore the supports and constraints experienced by patients and prescribers regarding patients' use of medicines</li> </ol>

Discourse analysis is proposed as the appropriate methodological framework for this analysis since it enables examination of the ways in which discourse is used within the encounter, by both patient and prescriber, to achieve personal, social and political goals (Starks & Brown Trinidad 2007). Discourse, it is suggested, both mediates and constructs an individual's understanding of reality and determines the social roles that are available to them. Analysis of this nature can enable an understanding of the ways of thinking and speaking about patients' use of medicines and how this reality is constructed and can expose common assumptions, which may be taken-for-granted and thus otherwise invisible (Cheek 2004, Starks & Brown Trinidad 2007).

The dissertation was organised as follows to examine the context of the study, justify the chosen methodological approach and to outline the thesis developed through analysis of the data that was obtained.

### **1.3 Organisation of the dissertation**

#### **Chapter 2: Policy and Practice in Non-Medical Prescribing**

This chapter focuses on the non-medical prescribing role in the United Kingdom and examines the policy drivers which have contributed to its continued development. It outlines the prescribing roles available to nurses and pharmacists and the ways in which the independent prescribing role facilitates the involvement of nurse/pharmacist prescribers in the management of long-term conditions. Research evaluating prescribing is reviewed, with a particular focus on the extent to which non-medical prescribers demonstrate safe practice, stakeholder views of their role and studies examining the nurse/pharmacist prescribing encounter and the ways in which patients' use of medicine are facilitated. The limited number of observational studies in this area is highlighted to illustrate the need for further examination of the complexities of the non-medical prescribing encounter (Offredy et al 2008).

#### **Chapter 3: Patients' use of medicines**

The nature and extent of the difficulties found with patients' use of medicines are examined in this chapter. Different concepts used to define the issue are critically reviewed including compliance and adherence which focus predominantly on the doctor-patient encounter and demonstrate the asymmetry which is characteristic of such interactions. The different frameworks which are used to explain such asymmetry are reviewed and it is suggested that the non-medical prescribing encounter is likely to be characterised by a more subtle and fluid form of power than is evident with doctors and patients. The concepts of concordance and shared decision-making are examined to illustrate some of the complexities involved when trying to achieve effective partnership working with patients. It is argued that it is not clear whether this approach can affect the asymmetry evident within the encounter. Post-structural approaches, particularly the work of the French intellectual, Michel Foucault, are reviewed to examine their potential utility within the current project.

#### **Chapter 4: Research methodology and methods**

This chapter outlines the methodological approach underpinning the study and a generic approach to discourse analysis is justified. It examines the methods through which data were collected, including recruitment of the sample together with the use of observation methods to examine the nature of the encounter and semi-structured

interviews with patients and prescribers. The use of Nixon and Power's (2007) framework to enhance the rigour and quality of the study is justified. The nature of the sample recruited within the study is explored, including the type of medicines taken by each of the participants. The non-recruitment of pharmacists is examined and the reasons for finally recruiting nurse prescribers only are discussed.

### **Chapter 5: Findings: Patient-prescriber encounters**

Findings from the patient-prescriber encounters are examined within this chapter. The nature and structure of the encounters is discussed, including the prescriber's approach to medication review within the consultation. The asymmetry that was evident within the encounter is outlined. Themes emerging during the consultation are explored, including the moral and responsible approach adopted by patients to the use of medicines in the context of their everyday lives. The prescribers' emphasis on patient education is examined together with their tendency to interrupt or ignore patient assertions of existing knowledge or their demonstration of a responsible approach to managing their condition.

### **Chapter 6: Findings: Patient and prescriber interviews**

This chapter is focused on the findings obtained from the analysis of semi-structured interviews undertaken with both patients and nurse prescribers. The analysis was sensitive to both *a priori* themes, indicating the socio-cultural assumptions and discourses underpinning the matters discussed and emergent themes identified within the data. Two main themes were identified; the nurse's role as a prescriber and patients' use of medicines. Sub-themes were identified including the value of the prescribing role and constraints experienced within the role; together with a sub-theme describing patients' use of prescribed medicines as either an issue of a responsibility to live normally or one of understanding and engagement. A further sub-theme, information and support, is also examined.

### **Chapter 7: Discussion and conclusions**

This chapter aims to synthesise and interpret the findings from the encounter and interview data sets in order to develop a coherent and critical account of the management of patients' use of medicines within the nurse prescribing encounter. It first examines the prescribing practice evident within the encounter and then reviews the ways in which the patients' use of medicines was constructed, focusing particularly on the key discourses used by each group of participants. A thesis is

presented within the chapter that suggests that, although the patient-prescriber encounter appears to take place in the context of a long-term relationship which is highly valued by patients, it is characterised by an asymmetry similar to that found within the doctor-patient encounter together with the use of contrasting moral discourses by patients and prescribers respectively in relation to the construction of patients' use of medicines. The writings of Foucault (e.g. 1988, 1991) are used to present a critical explanatory framework to illustrate the subtle manifestations of power and resistance within the encounter. The strengths and limitations of the study are reviewed and a number of recommendations made for research, practice and education.

## CHAPTER 2: POLICY AND PRACTICE IN NON-MEDICAL PRESCRIBING

Prescribing by practitioners other than medical doctors was first suggested over 30 years ago (Jones 1999) and, whilst developments initially proceeded slowly, non-medical prescribing in the United Kingdom is now more extensive and permitted in a wider range of professional groups than other developed countries such as Sweden, the United States and Australia, where non-medical prescribing is also allowed (Ball 2009, Kroezen et al 2011). The nature of the prescribing role now permitted in the United Kingdom means that certain non-medical practitioners such as nurses and pharmacists have prescribing powers comparable to those of their medical colleagues (Black 2013, McHale 2010, Ross et al 2014).

This chapter examines the development of non-medical prescribing in the United Kingdom and the policies which contributed to this emerging area of practice. It outlines the prescribing roles available and suggests that the independent prescribing role available to nurses and pharmacists enables their involvement in initiatives focused on the management of long-term or chronic conditions, a significant priority area within health policy. The growing body of research evaluating prescribing is reviewed which suggests that nurse and pharmacist prescribing is generally safe and accepted by patients and other stakeholders. There appears however to be limited research focused on the ways in which patients' use of medicines is managed within the non-medical prescribing encounter. Prescribed medications are the principal intervention in the management of long-term conditions (DoH 2012a) and it is argued that further empirical examination of this area of non-medical prescribing practice is required.

The previous chapter has noted the non-recruitment of pharmacists to the current study. The following literature therefore has an emphasis on the findings relating to nurse prescribing. Key sources relating to pharmacist prescribing are however included to fully illustrate the non-medical prescribing context.

### 2.1 Developments in non-medical prescribing

Initial developments in non-medical prescribing in England focused on enabling district nurses and health visitors to prescribe from a limited nursing formulary within community settings. Starting in a number of pilot sites across England in 1994, prescribing rights were extended to all district nurses and health visitors in England in 1998 (Green 2002). Further developments however proceeded at a slow pace

initially (Green, 2002, Jones 1999, Latter et al 2011) and it was not until the publication of the NHS Plan (DoH 2000) that prescribing by practitioners other than medical doctors became an integral part of the NHS modernisation agenda (Offredy et al 2008). At that time non-medical prescribing was viewed as an effective means of fulfilling key principles within the NHS Plan, such as achieving a required flexibility in patient care services, enabling patients to gain quicker access to medicines, with a more appropriate response to their needs through the effective deployment of skills available in the workforce (Kroezen et al 2011, Offredy et al 2008, Latter et al 2011, Ross et al 2014). Effective prescribing always involves balancing the benefits of a medication with its potential risks (Avery et al 2012, Dornan et al 2009) and thus consideration of patient safety has always been paramount in developments in non-medical prescribing (DoH 2006a, 2006b, Courtenay et al 2007, Latter et al 2011).

The perceived importance of non-medical prescribing in the achievement of different policy objectives contributed to a series of wide-ranging developments in terms of the number of different healthcare professions permitted to prescribe, the types of prescribing role available and the nature of the medicinal products that could be prescribed by non-medical prescribers. An overview of the developments in non-medical prescribing is presented overleaf in Table 2.1.

The developments have enabled two different prescribing roles, namely independent and supplementary prescribing. Independent prescribing is defined as 'prescribing by a practitioner responsible and accountable for the assessment of patients with undiagnosed or diagnosed conditions and for decisions about the clinical management required, including prescribing' (DoH 2006a:2). The independent prescriber is therefore accountable for the clinical assessment of a patient, establishing a diagnosis and for decision-making regarding the appropriateness of a medicinal product or appliance, together with writing the prescription (Kroezen et al 2011). Independent prescribing can take place from within a limited formulary such as that available for community nurses or from a complete formulary, with independent nurse and pharmacist prescribers in the United Kingdom permitted to prescribe from the British National Formulary at the time of data collection for the current study. More recently physiotherapists and podiatrists have also been permitted to prescribe on an independent basis (Allied Health Professions' Federation 2013).

Table 2.1 Developments in non-medical prescribing<sup>1</sup>

Date	Report/legislation <sup>2</sup>	Developments in prescribing
1986	Cumberlege Report	Recommended prescribing by district nurses and health visitors from a limited, nursing formulary
1992	Prescription by Nurses, etc. Act (and subsequent Commencement Order 1994)	Allowed prescribing from the Nurse Prescribers' Formulary for Community Practitioners by district nurses and health visitors (and practice nurses with either of these qualifications). First pilot sites were established in 1994 and the prescribing course was made available to all DNs and HVs in 1998.
2001	Health & Social Care Act	Allowed nurses working within the minor illness, minor injuries, health promotion and palliative care fields to prescribe from an extended formulary of licensed prescription only medicines.
2003		Introduction of supplementary prescribing by nurses & pharmacists
2005	Prescription Only Medicine (POM) Order amendments	Supplementary prescribing by physiotherapists, radiographers, podiatrists and optometrists
2006	Medicines Order (Human Use)	Nurse & pharmacist independent prescribing of any licensed drug within the BNF within the practitioner's sphere of competence and clinical governance arrangements of employer (inc. small number of CDs by nurses only)
2008	Medicines for Human Use (Prescribing) (Miscellaneous Amendments) Order	Independent prescribing by optometrists from limited formulary
2009	Medicines (Exemptions and Miscellaneous Amendments) Order	Nurses & pharmacists allowed to prescribe two or more medicines as a mixture - enabled prescribing of unlicensed medicines
2012	Misuse of Drugs (Amendment No.2) (Regulations 2012 (SI: 2012/973)	Nurses and pharmacists allowed to prescribe any controlled drug in the BNF within their competency (Schedules 2—5)
2013	Human Medicines Regulations 2012	Allowed independent prescribing by physiotherapists and podiatrists

Sources: Cooper et al (2008a), Green (2002), Latter et al (2011), Ross et al (2014).

#### Notes:

1: The dates listed here apply to England only. Whilst the policy focus in other devolved countries in the United Kingdom is similar to that in England, developments in policy & practice have followed a different trajectory and demonstrate some minor differences in detail (Latter et al 2007a).

2: The legislation listed here involved amendments to The Medicines Act 1968, the primary medicines legislation within the UK. It is acknowledged that many parts of the Medicines Act have been revoked by The Human Medicines Regulations, 2012 (Allied Health Professions' Federation 2013). The legislation is therefore presented here only to enable understanding of the many developments in prescribing.

Supplementary prescribing was introduced in 2003, following recommendations in the final Crown report (DoH 1999) for a model of prescribing involving a partnership arrangement between the non-medical prescriber, a doctor or dentist and the patient. Appropriately qualified nurses, pharmacists and, from 2004, certain groups of allied health professionals (physiotherapists, radiographers, podiatrists, optometrists) were enabled to prescribe for a patient following initial diagnosis by the doctor or dentist. Supplementary prescribing takes place, with the patient's agreement, in accordance with a patient-specific clinical management plan (CMP) and allows any medication to be prescribed for any medical condition included within the CMP, including controlled drugs (DoH 2005a). Nurses and pharmacists are also able to prescribe on a supplementary basis when qualified as independent prescribers.

When planning the current study in 2009, certain groups of practitioners such as physiotherapists, radiographers and podiatrists were able to prescribe on a supplementary basis only. Whilst this allows a valuable role in the management of long-term conditions, there were relatively few prescribers from such disciplines (Stuart et al 2008) and the extent to which their practice might be influenced by the independent medical practitioner was unclear. Nurse and pharmacist independent prescribers only were therefore included in the study since the range of medicines they may prescribe has enabled their increasing involvement in the care of patients with long-term conditions (Latter et al 2011). Independent prescribers are able to manage the care of such patients without direct medical involvement, whilst regular medical review of the patient is required within supplementary prescribing (DoH 2005a, Cooper et al 2008a). The role of the independent prescriber therefore means that they assume a significant responsibility for diagnosing the patients' condition, prescribing where necessary and supporting the patient's use of prescribed medication. Examination of the ways in which they fulfil this latter responsibility is the major focus for this study.

As previously discussed it was not possible to recruit pharmacist prescribers to the current study. Literature pertaining to the pharmacist prescribing role is still however considered within the chapter since it enables a full consideration of the non-medical prescribing context. Possible reasons for the lack of recruitment of pharmacists are explored in Chapter 4.

## 2.2 Non-medical prescribing and health policy

Recent policies have enabled the non-medical prescribing role to achieve a greater prominence in the delivery of health care services. It is argued that organisations which have embraced non-medical prescribing are able to improve patient care and meet several government targets whilst saving money and generating income (Fittock 2010). Non-medical prescribing is reported to enhance service delivery in many settings including urgent care, primary care and mental health by ensuring the cost-effectiveness of services and preventing or reducing hospital stays. In addition non-medical prescribing enables organisations to meet the care standards for specialist conditions and to address the demands of the reduction in junior doctors' hours caused through implementation of the European Union Working Time Directive (Fittock 2010).

Hacking & Taylor (2010), reporting results from a multi-professional evaluation of non-medical prescribing conducted within 15 NHS Trusts in the North West region of England, support such claims. The savings achieved through non-medical prescribing were found to be substantial and included the prevention of hospital and GP appointments, prevention of admission to hospital, shorter stays in hospital and a reduction in attendance at the accident and emergency department. Other outcomes identified within the audit included patient satisfaction, improved patient outcomes and the identification of adherence concerns. Sherrington & Bell (2011), based on results from the same evaluation, suggest that non-medical prescribing enabled Trusts to achieve the aims outlined within the current Quality, Innovation, Productivity and Prevention (QIPP) programme, a national Department of Health strategy developed to improve the quality and delivery of NHS care, whilst also reducing costs (DOH 2010). Non-medical prescribing had thus been used to introduce a range of innovative services in the majority of Trusts and was found to be safe and effective, taking place in a timely manner with no delay experienced by patients in receiving the prescription required. It also enabled prescribers to complete an episode of care rather than referring the patient to a doctor.

Non-medical prescribing is also seen as central to the quality and cost-effectiveness of care of patients with a long-term condition (Latter & Blenkinsopp 2011, Fittock 2010). Since patients with a long-term conditions and their use of medicines are the key focus for the current study, relevant policies and their influence on non-medical prescribing are outlined here. The ways in which nurse and pharmacist prescribers

are increasingly used in a number of services to meet the needs of patients with a long-term condition are explored in section 2.3.1.

Long-term conditions are defined as those that ‘cannot, at present be cured, but is controlled by medication and/or other treatment/therapies’ (DoH 2012a:3). Internationally and in the research literature, the term chronic is often used to describe such conditions. Long-term will however be used here as a descriptor since it reflects the term used within the United Kingdom policy literature.

Long-term conditions represent a significant and growing problem for the National Health Service in the United Kingdom and also in other developed countries (DoH 2012a, Nolte and McKee 2008). There are currently around 15 million people in England with at least one long term condition and there is evidence that the prevalence of long-term conditions is rising particularly in relation to diabetes, cancers and chronic kidney disease. Increasing numbers of people are now living with multiple morbidities (DoH 2012a, National Health Service England (NHSE) 2012). People with long-term conditions make significant demands on all sectors of the health and care services and account for an estimated 70% of the total amount spent on health and social care per year (DoH 2012a). The increasing cost of long-term conditions means that the efficiency and effectiveness of services for those affected has been a major policy focus in recent years.

Important priorities in relation to the management of long-term conditions are to reduce the money spent on such conditions through a reduction in unscheduled hospital admissions, reductions in length of stay in hospital and enhancing patients’ ability to manage their own condition through patient education and supported care planning (Royal College of Nursing (RCN) 2012a, Smith 2012). National standards for the management of conditions to reduce the regional variation in their management and ensure the cost-effectiveness of the standards adopted were established through strategies such as National Service Frameworks and the work of the National Institute of Clinical Excellence (now National Institute for Health and Care Excellence) (DoH 2000, DoH 2012a).

A particular policy aim has been to enhance the management of long-term conditions in primary care through the development of the Qualities and Outcomes Framework, commonly referred to as QoF (Griffiths et al 2010a). Introduced as part of the new General Medical Services contract (DoH 2003), QoF was an annual reward and incentive programme detailing each General Practice (GP) surgery’s achievements on a number of indicators focused on the management of patients

with specified long-term conditions. Incentives included in the QoF promoted the delivery of services aimed at the prevention and management of long-term conditions in primary care rather than in acute settings (McElduff et al 2004). Following implementation of the QoF, the management of patients with stable long-term conditions not requiring the GPs' expertise were usually delegated to nurses who were frequently qualified as prescribers (Griffiths et al 2010a). The number of nurses employed in a general practice setting has been shown to positively influence the practice's attainment of QoF points although there was no information given about how many of the sample were prescribers (Griffiths 2010b).

Non-medical prescribing also contributed to policies related to the management of long-term conditions through the employment of a group of nurses working in primary care settings known as community matrons. This new nursing role was promoted by the Department of Health, within the NHS Improvement Plan, to deliver personalised, managed care to adults with complex long-term needs in their own home to prevent admission to hospital (DoH 2006c). The ability to prescribe was identified as essential for the matron's role, the only time this activity has been reported as essential for a specified healthcare role (DoH 2006c).

There has also been an emphasis in long-term conditions policies about the provision of services by pharmacists but, until recently, the services were those that did not require a prescribing qualification. Services included, for example, Medicines' Use Reviews and the New Medicines Service where patients with a long-term condition receive expert adherence-centred advice from an accredited pharmacist regarding their use of medicines (DoH 2013). Pharmacists also play a key role in medicines optimisation, a whole-system approach focused on patient experience and aimed at improving safety, adherence to treatment and reducing waste (RPS 2013b). Since the introduction of independent prescribing in 2006, pharmacist prescribers are also increasingly involved in the clinical management of patients with long-term conditions although their roles vary in terms of the extent to which they are responsible for making a diagnosis (Noyce et al 2010, Fittock 2010). Changes to the pre-registration training for pharmacists have been recommended to enable pharmacists to become supplementary prescribers at the point of registration to enable them to make a maximum contribution to patient care (Noyce et al 2010).

In summary, the adoption of non-medical prescribing within organisations has the potential to enable the achievement of several policy targets and initiatives. It can

also serve to address issues of workforce capacity and efficiency to ensure the delivery of high quality, safe and cost-effective services that are accessible to patients (DoH 2009). There is however some evidence that NHS Trusts have not developed a strategic approach to the utilisation of non-medical prescribers within their workforce so do not fully exploit the opportunities they provide (Courtenay et al 2011, Latter and Blenkinsopp 2011, Lim et al 2012). The following section will review the developing evidence base for non-medical prescribing, including its nature, its safety and whether it is acceptable to stakeholders to illustrate the extent to which it may enable more effective working with patients about their medicines' use for a long-term condition.

### **2.3 Non-medical prescribing: the evidence-base.**

There was limited research relating to the role of community nurse prescribers, particularly in relation to the nature of the prescribing practice demonstrated. Most of the studies involved small samples and were often conducted in a limited area, limiting the transferability of findings (Latter et al 2005). Patients however reported that they found nurse prescribing convenient and valued the continuity of care they received from nurses (Brooks et al 2001, Luker et al 1998, Nolan et al 2001). Nurses generally reported an increased sense of satisfaction and autonomy within their prescribing role and found it was convenient and saved time (Lewis-Evans & Jester 2004, Luker 1997, Rodden, 2001). There was however concern expressed, particularly by doctors, that nurse prescribers were inadequately prepared for their role (Horton 2002) and that their pharmacological knowledge was insufficient (Sodha et al 2002). There was also concern expressed that many community nurse prescribers did not prescribe in practice or prescribed infrequently (Luker & McHugh 2002, While & Biggs, 2004).

There has been greater research interest in independent and supplementary prescribing, including both quantitative and qualitative studies. Recent studies include a number of national or large scale surveys (Bissell et al 2008, Carey & Courtenay 2008, Courtenay et al 2007, Latter et al 2005, 2011). A systematic review of international literature relating to nurse prescribing however found that many studies in this area continued to be characterised by the use of small samples and methodological deficits (Bhanbro et al 2011). The significant changes in the non-medical prescribing role, described above (Section 2.1), together with on-going developments in the educational preparation required to undertake a specific

prescribing role, also mean that it is necessary to be cautious when assessing the relevance of research findings obtained before, or soon after, the major developments that occurred in 2006, a concern highlighted by some authors (e.g. Latter et al 2007a, Bissell et al 2008). Delays in publication can also mean that papers published as recently as 2009 may be based on data collected from participants working within the extended formulary for nurse prescribers. The literature included within the following section is therefore largely focused on the independent and supplementary prescribing role. A small number of studies also include prescribers in other roles, such as extended formulary nurse prescribers and it is noted if such prescribers have been included in the sample when discussing the research.

Several themes are evident in the literature including the extent and nature of non-medical prescribing, its safety and stakeholder views of the prescribing role. Only a small number of studies focus on the examination of the actual practice of non-medical prescribers, with limited interest, thus far, on the non-medical prescribing encounter or the ways in which patients' use of medicines is facilitated (Latter et al 2005, Offredy et al 2008). In the following section, research is reviewed to determine the extent to which non-medical prescribers are engaged in the management of patients with a long-term condition. Evidence relating to the safety of non-medical prescribing practice is also considered, together with studies exploring the acceptability of the non-medical prescribing role to patients and other professionals, since such issues are of particular significance in ensuring that non-medical prescribers are able to work effectively with patients and colleagues in the management of long-term conditions. The limited number of studies examining the non-medical prescribing encounter will also be explored.

### 2.3.1 The extent and nature of non-medical prescribing

The non-medical prescribing workforce is described as 'large and growing' (Fittock 2010: 11). Figures for England showed over 19,000 nurse independent prescribers, 1,545 pharmacist independent prescribers together with over 32,000 community practitioner nurse prescribers and several hundred allied health professional prescribers (Centre for Workforce Intelligence 2012, RCN 2012b, Stenner et al 2011). The lower numbers of pharmacist prescribers is a likely factor in the eventual non-recruitment of pharmacists to this study, which will be explored in section 4.5.

Earlier studies indicated that primary care was the most common health care setting in which non-medical prescribing occurs (e.g. Latter et al 2005, George et al 2006,

Avery et al 2007, Bissell et al 2008, Courtenay et al 2007, Hacking & Taylor, 2010). Latter et al (2011), in a large scale national survey in England, however found secondary care to be an increasingly important context for nurse independent prescribers with a mean of 21.4 nurses employed in an independent prescribing role in NHS acute/foundation Trusts, compared to the average of 9.4 non-medical prescribers found per acute Trust in 2006, 88% of whom were nurses (Healthcare Commission 2006).

In contrast to the infrequent use of prescribing abilities found in early studies of community nurse prescribing reported above, there is evidence that independent and supplementary prescribers are prescribing regularly and the number of non-medical prescribers using their prescriptive authority has increased (Courtenay et al 2006, Hacking & Taylor 2010, Latter et al 2005, 2011). A survey of 2,500 nurse prescribers conducted by the Royal College of Nursing found that 61.3% of respondents reported that they prescribe on a daily basis (RCN 2012b). Independent prescribing was found to be the most common model of prescribing, particularly for nurse prescribers (Carey & Courtenay 2008, Courtenay & Carey 2008a, Hacking & Taylor 2010, Latter et al 2011).

Latter et al's study (2011) showed some changes in the types of conditions managed by non-medical prescribers, nurses in particular. Pharmacist prescribers continued to prescribe mainly for cardiovascular conditions such as hypertension and heart failure as found in other studies (e.g. George et al 2006, Blenkinsopp & Chatterton 2007, George et al 2007, Bissell et al 2008, Latter et al 2011) and also for diabetes (Warchal et al 2006, Latter et al 2011). Nurses however most frequently prescribed for infections, asthma, diabetes and respiratory disease, in contrast to an earlier survey which showed that the most common conditions managed by independent nurse prescribers were skin conditions, family planning and soft tissue injuries, possibly reflecting the products available in the limited extended formulary available at that time to the nurses who formed the sample (Latter et al 2005). In an analysis of Prescribing Analysis and Cost data which provides evidence of prescribing costs and trends in primary care, Bissell et al (2008) found evidence of increased prescribing by nurses for long-term conditions such as hypertension and other cardiovascular diseases. Substantial increases in nurse prescriptions for drugs used to treat diabetes were also found.

The increasing role of non-medical prescribers in prescribing for patients with long-term conditions has also been noted in other studies. For example, the nurse

prescribing role has been explored in relation to the management of patients with diabetes (Carey & Courtenay 2008, Courtenay & Carey 2008b, Courtenay et al 2009a, Courtenay et al 2010, Hacking & Taylor 2010, Stenner et al 2011, 2011b), cardiology (Hacking & Taylor 2010), respiratory conditions (Carey et al 2014, Courtenay & Gordon 2009, Hacking & Taylor 2010), chronic pain (Courtenay & Carey 2008c, Stenner & Courtenay 2008, Stenner et al 2012) and dermatological conditions (Carey et al 2009, Carey et al 2013, Courtenay et al 2009b). Pharmacist prescribing responsibilities included the management of conditions such as cystic fibrosis and HIV and prescribing within total parenteral nutrition (Hobson & Sewell 2006). Whilst the studies suggest that prescribers are confident in their ability to prescribe in such areas, concern has been expressed by nurse and pharmacist independent prescribers about managing patients with more than one condition (Latter & Blenkinsopp 2011, Latter et al 2011). An increasing number of patients are now living with two or more conditions and it is predicted that there will be a marked increase in the numbers of people having multiple long-term conditions (DoH 2012a). Latter et al (2011) recommend that further consideration is given to the ways in which prescribers can be fully prepared to prescribe safely and effectively across conditions to fully exploit their potential role in the management of long-term conditions.

Nurse and pharmacist prescribers are therefore actively involved in the management of patients with a range of long-term conditions and prescribe on a regular basis. There is further potential for development in relation to the management of patients with more than one long-term condition. The next section will review evidence for the safety of the prescribing practice demonstrated by nurse and pharmacist prescribers.

### 2.3.2 Safety in non-medical prescribing

As highlighted above (section 2.1), patient safety has always been a key consideration in any developments in non-medical prescribing. Safe prescribing practice is a particular consideration for nurses and pharmacists qualified since 2006, in light of their extensive prescribing rights. Policy and professional standards require independent nurse and pharmacist prescribers to work within their competence and local clinical governance arrangements, placing a particular emphasis on individual responsibility for safety (DoH 2006a, NMC 2006). Many patients with a long-term condition can be taking several medicines at any one time,

particularly those in older age groups (Duerden et al 2013, Knight et al 2013), further emphasising the importance of safe and appropriate prescribing.

Bradley et al (2007) undertook in-depth interviews with 31 extended formulary nurse prescribers in one region of England and found that nurses had an enhanced sense of the accountability and responsibility involved in the prescribing role and demonstrated a cautious approach in practice, prescribing only those drugs that were familiar to them. Nurses felt that the multidisciplinary team, including doctors and pharmacists, was an essential source of support in their extended role, particularly those nurses working in a community setting. Other studies have concluded that non-medical prescribing generally enhances patient safety although this is mostly assessed through self-report (Courtenay et al 2006, Courtenay et al 2007, Courtenay & Carey 2008a). Until recently there were a limited number of studies evaluating the safety of non-medical prescribing practice directly (Bissell et al 2008).

Latter et al (2007a) found, in a national survey of extended formulary nurse prescribers, that most nurses reported confidence in their ability to make a diagnosis and decide treatment options in partnership with the patient. Structured observation of consultations using a checklist developed from a national competency framework for nurse prescribers found that the majority of prescribers explained the patient's diagnosis and gave clear instructions about the use of medicines, checking the patient's understanding (Latter et al 2007a). They were however less likely to explore patient beliefs about medicines, advise the patient about possible side effects or interactions with other medicines or enquire about allergies. Obtaining information about allergies and advising about side effects are emphasised in professional prescribing standards to enable safe prescribing (General Medical Council 2013, NMC 2006). Courtenay et al (2009a) also found that extended formulary nurses prescribing independently for patients with diabetes did not always provide information about side effects and patients' use of herbal or over-the counter medicines was not always examined. Similar findings were evident in a study of nurses prescribing for patients with dermatological conditions (Courtenay et al 2009b).

Concerns have been expressed about the pharmacological knowledge and clinical decision making of extended formulary nurse prescribers (Offredy et al 2008) and their assessment and diagnostic skills (Latter et al 2007b). Pharmacist prescribers were reported to have difficulties in their assessment and patient counselling skills

(Buckley et al 2006, Cooper et al 2008a, Latter et al 2011, Noyce et al 2010). Review of nurse, pharmacist and doctor prescribing consultations however found that all decisions were generally clinically appropriate although pharmacists tended to prescribe more costly medicines (Latter et al 2012).

Expert panel review of prescriber-patient consultations was undertaken within a national evaluation of supplementary prescribing by nurses and pharmacists in England, (Bissell et al 2008). No errors were found in the prescriptions issued during the consultations although a small number were classified as inappropriate due to the use of branded rather than generic medications and the use of an expensive product where cheaper options were available. Errors were also found in the use of the clinical management plan in six study sites, with doctors' signatures being obtained following prescribing, the use of generic rather than patient-specific plans or where a clinical management plan was missing (Bissell et al 2008). All such practices contravene legal and policy requirements for supplementary prescribing (DoH 2005a).

An extensive range of data relevant to patient safety in prescribing was collected by Latter et al (2011). A national questionnaire survey of nurse and pharmacist independent prescribers suggested that practitioners believed there were no concerns about patient safety arising from their practice. The majority of prescribers felt they were prescribing within their competence and were not under pressure from colleagues to prescribe. Concerns were however expressed by almost 25% of participants about making an incorrect diagnosis and about prescribing for patients with co-morbidities, a finding which was more marked in nurses.

Expert panel review of audio-recorded prescribing consultations (n=100) was undertaken using a validated tool. The review showed that most prescribing decisions were clinically appropriate. There were no significant differences found in the appropriateness of nurse and pharmacist decisions (Latter et al 2011). Qualitative comments from the review panel mostly showed positive evaluation of the prescribing episode. Concerns were however raised about history taking and diagnostic skills in over 25% of consultations for both nurse and pharmacist prescribers and sub-optimal prescribing of, for example, antibiotics. Latter et al (2011) however emphasised that, with a potential 400 comments for each indicator on the validated tool, the number of negative comments made was relatively small.

Audit was also undertaken of records of patients with asthma, diabetes, lipid modification and lower urinary tract infection (Latter et al 2011). Treatment for

diabetes generally followed national guidelines as did that for urinary tract infection, except in relation to treatment length. Guidelines were however generally not followed in relation to asthma and lipid modification in that the least expensive medication was not prescribed for asthma and the initial dose of lipid-lowering medication was not as recommended. No evidence was found that patients and carers were routinely given any leaflets relevant to their condition.

Whilst studies therefore demonstrated that prescribers generally worked within guidelines for safe and effective prescribing practice, there was some evidence that employing Trusts needed to adopt a more strategic approach to non-medical prescribing. Most Trusts reported clinical governance procedures were in place although policies for monitoring and review of non-medical prescribing practice were less than robust (Courtenay et al 2011, Latter et al 2011, Lim et al 2012). Systems for identifying and dealing with poor performance were generally evident only in secondary care settings (Latter et al 2011), leading once more to a greater emphasis on the individual prescriber's own responsibility for ensuring safe and effective practice.

In summary, there is a growing body of evidence that nurse and pharmacist prescribers demonstrate safe and effective practice. There are however some concerns about nurse and pharmacist abilities to undertake a systematic patient assessment to inform a correct diagnosis and the information about medicines which is sought from patients and provided to them. Particular issues have been identified in relation to non-medical prescribing for patients with long-term conditions in terms of prescribers' confidence in dealing with co-morbidities and incorrect use of clinical management plans. Responsibility for the provision of safe and effective prescribing practice remains largely with the individual prescriber, in the absence of a clear and coherent strategy amongst NHS employers.

The next section examines research relating to the views of non-medical prescribing held by a range of stakeholders, particularly those of patients since the nature of views held about the role are likely to be influential in the establishment of effective relationships between prescribers and patients with a long-term condition and the acceptance of any prescribed medication. Consideration also occurs of the views of healthcare professionals, including non-medical prescribers, to identify potential supports and constraints which could influence the independent prescribing role.

### 2.3.3. Stakeholder views of non-medical prescribing

There are a significant number of studies relating to the ways in which non-medical prescribing is perceived by patients, non-medical prescribers and other healthcare professions, particularly doctors. A summary only of the research is therefore presented here to illustrate key findings.

#### 2.3.3(i) *Patient views of non-medical prescribing*

Patients generally evaluated both independent and supplementary prescribing positively, valuing the longer consultations that are generally involved, greater continuity of care and perceiving the nurse or pharmacist prescriber as generally more approachable (Avery et al 2007, Bissell et al 2008, Courtenay et al 2010, Courtenay et al 2009b, Latter & Courtenay 2004, Latter et al 2005, Latter et al 2007a, Latter et al 2011, Tinelli et al 2013). Consultations with nurse or pharmacist prescribers were generally viewed as holistic, educative and informative (Drennan et al 2009, Page et al 2008, Stenner et al 2010a, Watterson et al 2009).

Hobson et al (2010) reported that patients seemed to prefer nurses as prescribers rather than pharmacists. This preference was mainly due to the quality of the relationship they felt able to form with nurses and concerns about privacy for consultations with a community pharmacist and clinical governance issues such as confidentiality of patient records. This study however involved 18 patient participants only, a minority of whom had current experience of pharmacist prescribing. Participants' experience of nurse prescribing was unclear in the study although the authors suggest most patients were familiar with nurses in extended roles. There were also acknowledged difficulties with the interview schedule.

Bissell et al (2008) interviewed 28 patients with a long-term condition receiving treatment from a nurse or pharmacist supplementary prescriber in primary care settings. Patients generally believed that supplementary prescribing had been introduced to reduce the workload of doctors and to save costs. They recognised the specific clinical specialism that supplementary prescribers worked within and contrasted this with the more general clinical work of doctors. Patients perceived the 'clinical niche' that supplementary prescribers worked within as positive (Bissell et al 2008:60) and believed this led to superior clinical knowledge to that of general practitioners. Not all patients were however equally positive about supplementary prescribers, some perceiving that the doctor was really the best person to prescribe. One verbatim quote provided in the report, for example, refers to '[the doctor]

putting you down to a labourer' (Bissell et al 2008: 61). No information was however provided regarding the extent to which such beliefs were common in the patient group.

Latter et al (2011) noted the variability in patient views about non-medical prescribing. Latter et al (2005), for example, found that some patients preferred a doctor as prescriber rather than an extended formulary nurse prescriber. Patient preferences for prescribing by a nurse, pharmacist or doctor for specific conditions were therefore examined in the later study using a validated tool, the Discrete Choice Experiment, which quantified the strength of patients' preferences and enabled the identification of attributes which contributed to their decision.

Patients reported no strong preference for a medical or non-medical prescriber in primary care (Latter et al 2011, Tinelli et al 2013). When consulting for a long-term condition such as hypertension, patients equally preferred prescribing by their own doctor or a pharmacist prescriber rather than any available doctor in the surgery. The attribute patients reported as most important was that the practitioner should pay attention to their views about medicines. Patients would prefer to see a pharmacist prescriber with this attribute rather than their own doctor when other factors such as ease of making an appointment were equal (Gerard et al 2012, Latter et al 2011). If consulting for a minor illness such as headache and fever, patients preferred a prescribing service rather than doing nothing. Seeing their own doctor was preferred to a prescribing nurse. However, when the patient had previous experience of a nurse prescriber, patient preference was reversed, suggesting that patients may be initially cautious about nurse prescribers but perceptions are changed following experience of nurses in this role (Latter et al 2011).

In summary, patients generally evaluate the nurse or pharmacist prescribing role positively, valuing the continuity of care received and the personal approach of the prescriber. There were however a variety of opinions expressed and patients could feel that they were being treated by a practitioner with less expertise than the doctor. Overall, the professional's attention to the patient's views about medicines was rated as most important by patients, highlighting the importance of this issue as a topic for exploration within the study.

### *2.3.3(ii) Healthcare professional views of non-medical prescribing*

Nurse and pharmacist prescribers have generally welcomed their role, as an independent or supplementary prescriber, feeling that it enhanced their sense of autonomy, increased job satisfaction and led to greater effectiveness. There was also a general perception that non-medical prescribing improved patient access to medicines and improved continuity for patients, including more vulnerable groups (Avery et al 2007, Cooper et al 2008a, Bissell et al 2008, Carey et al 2009, Courtenay et al 2007, Downer & Shepherd 2010, George et al 2006, Hacking & Taylor 2010, Stenner & Courtenay 2008, Stenner et al 2009). Carey et al (2010) found that a variety of stakeholders, including nurse prescribers, doctors, non-prescribing nurses in the team and administrative staff, found that non-medical prescribing made better use of nurses' skills and that patients regarded them as more approachable than doctors.

Early studies of the nurse prescribing initiative showed that many doctors expressed concern about the safety of such prescribers, highlighting the academic and clinical experience of nurses, which were felt to be inadequate for their significantly extended role (British Medical Association 2005). Other doctors however felt that nurses would not necessarily prescribe beyond their competence although they cautioned that they required appropriate training and support (Avery & Pringle 2005). The caution expressed by doctors may be over-stated since recent studies have reported that most nurse prescribers demonstrate academic qualifications beyond degree level and professional experience greater than the minimum requirements of the Nursing & Midwifery Council (Carey & Courtenay 2008, Courtenay et al 2007, Hacking & Taylor 2010, Latter et al 2005, Latter et al 2011).

Doctors generally perceive that non-medical prescribing has had an impact on their workload with some believing that it has been reduced, whilst others believe their workload has increased due to the need to provide on-going support to nurse and pharmacist prescribers. There was general agreement that the nature of their workload has changed as most doctors are now seeing patients with more complex conditions (Avery et al 2007, Carey et al 2010a, Hacking & Taylor 2010).

Several constraints have been identified in relation to effective non-medical prescribing practice. These include the on-going support available to non-medical prescribers from colleagues, managers and medical staff (Bissell et al 2008, Bradley et al 2007, Courtenay et al 2007, Nolan & Bradley 2007), together with

access to continuing professional development, which is essential to ensure professional practice is in accordance with nursing and pharmacy professional codes and government guidelines (DoH 2006, NMC 2006, RPSGB 2006). There is however evidence that the development needs of prescribers are not always being met, particularly in primary care settings (Carey & Courtenay 2010, Cooper et al 2008b, Courtenay et al 2007, Courtenay & Gordon 2009, Downer & Shepherd 2010, Winstanley 2009). Smith et al (2014) however reported that professional development opportunities were available within the majority of Trusts participating in a national sample in England.

The importance of a good relationship with the (usually medical) independent prescriber is highlighted by supplementary prescribing (Carey & Courtenay 2008, Bissell et al 2008) although the lack of awareness of this prescribing role amongst patients, colleagues, doctors and those commissioning new services was thought to be a barrier to its effective use (Cooper et al 2008b). A lack of information technology facilities appropriate for supplementary prescribing and limited access to a common electronic patient record were perceived as barriers which could lead to fragmented care and threats to patient safety (Bissell et al 2008, Cooper et al 2008a).

A small number of studies have examined the impact of non-medical prescribing on the nature and boundaries of the practitioners' role. Bradley and Nolan (2004) reported extended formulary nurse prescribers' concerns that prescribing would lead to the adoption of a medical model of care, with similar concerns expressed in Latter et al's study (2005). Stenner et al (2010b) however found that nurses prescribing for patients with diabetes made particular efforts to maintain a traditional holistic nursing focus within the prescribing role although much greater flexibility in terms of appointment length was necessary to enable this. For many stakeholders, including nurse and pharmacist prescribers, the supplementary prescribing model was thought to emphasise the power of doctors as they retained authority in the initial diagnosis and in subsequent decision making, meaning that supplementary prescribing is potentially less threatening for doctors. Non-medical prescribers also believed the clinical management plan reinforced a biomedical model of patient care (Cooper et al 2008b).

Hales et al (2010) highlighted the tensions experienced by nurses in assuming a supplementary prescribing role since it was felt the process of achieving a doctor's signature on the CMP reinforced medicine's hierarchical position. Nurses working in

acute settings were for example generally required to develop the clinical management plan alone rather than in partnership with the doctor as suggested within policy guidance (DoH 2005a). They also felt that they needed to keep demonstrating their professional value to junior medical staff that changed regularly. Nurses working in community settings felt that the CMP was a threat to their autonomy, since the process was another way of 'standing outside the door' (Hales et al 2010:219) as it reflected the days before prescribing was allowed when they needed to wait for a GP to write a prescription for a patient they had assessed and diagnosed.

In summary, non-medical prescribing was viewed positively by patients and most other health care professionals with whom the prescriber works. It was also generally valued by most prescribers, since it led to an enhanced sense of autonomy and greater job satisfaction. Support from colleagues and medical staff, together with opportunities for continuing professional development were however required to enable effective prescribing practice. Certain tensions appeared evident in a supplementary prescribing role which was believed to reinforce medical power. The following section examines studies which have focused on the non-medical prescribing consultation to identify the current knowledge of ways in which the nurse or pharmacist encounter supports the patient's use of medicines.

#### 2.3.4 The non-medical prescribing encounter: working with patients and their use of medicines

As discussed earlier several studies suggest that nurse and pharmacist prescribers can enhance patients' use of medicines. Such assertions are however often based on patient reports that they are satisfied with the prescribers' decision-making and happy to take the prescribed medication (Jones et al 2007, Page et al 2008). In-depth studies of patients' views of their consultation with nurse prescribers have however shown that patients value the prescribers' specialist knowledge, receive clear and understandable information and were able to develop a greater understanding of their condition and how to manage it. Patients felt fully involved in any decision made and the authors suggest that patients' experience of the consultation indicate that patients will follow treatment recommendations (Stenner et al 2011). Latter (2011), in a response to Stenner et al, however suggests that it is difficult to be confident of such conclusions given the self-report nature of the data and the apparent lack of a theoretical framework to inform the analysis. The sampling strategy also involved a potential bias since patient participants were selected by the nurse prescribers and the nurses themselves were self-selected (Latter 2011).

Studies of actual prescribing practice however present a mixed view of the nurse prescribers' potential contribution to patients' use of medicines. Latter et al (2007a), in a national questionnaire survey of extended formulary nurse prescribers found that 95% of nurse participants reported that they were using the principles of concordance in practice, an approach to medicines-taking based on equal partnership with the patient and consideration of their values and beliefs about medicines (Shaw 2004). Observation of consultations undertaken by some of those completing the survey found that nurse prescribers listened to the patients' views and beliefs about medicines, explained their condition and checked their understanding of the proposed treatment in at least two-thirds of consultations observed. Latter et al (2007a) however argued that, although nurse prescribers were employing some of the foundation components of concordance, their neglect of issues such as allergies and possible drug interactions within the information provided about medicines was more consistent with a paternalistic approach to practice. Patients were therefore only given information that helped to ensure they took their medicine as prescribed whilst information that could lead to their informed choice to reject the medicine was withheld. The study also highlights the importance of conducting observations of nurses' actual prescribing practice rather than relying on self-reports.

Latter and her colleagues (Latter et al 2010) developed an intervention to enhance nurse prescribers' discussion of medicines within consultations and, in particular, to enable them to explore patient beliefs about prescribed medicines. Nurse independent prescribers working in the field of diabetes attended a series of four workshops focused on developing understanding of evidence-based approaches to behaviour change and enhancing nurses' perceived self-efficacy in health promotion. In interviews one and six months following the intervention prescribers suggested that they were more patient-centred in their approach and used relevant skills to enable patient participation such as open questioning and active listening. They however reported a number of factors which could constrain their ability to work in a patient- centred way including the time taken for this approach, particularly initially when the skills were new and a disruptive work setting where the consultation could be regularly interrupted. Prescribers were also concerned that some patients were not receptive to their new way of working and many prescribers shared their concern about 'opening a can of worms' in that extra work would be created should they become aware of patients' non-adherence to their medicines (Latter et al 2010:1135).

Audio-recordings of the prescribers' consultations took place at regular intervals following the intervention and were subjected to structured analysis using the validated tool MEDICODE (Latter et al 2010, Sibley et al 2011). The impact of the intervention was mixed with a significant increase in discussion of concerns about medication which was sustained but with a decrease in the frequency of discussion of medication non-adherence (Latter et al 2010). Positive changes were however seen in themes such as 'Asks patient opinion about medicines', 'attitudes toward medication' and 'discussion of 'concern about medicines', which were generally maintained post-intervention. No changes were found though in discussion of other important themes such as 'expected effects of medication'. Consultations were characterised by instruction-based discussion and generally neglected affective elements within the patient's experience. Discussion was largely initiated by prescribers although a dyadic discussion occurred, in contrast to the frequently monologic style found with doctors (Latter et al 2010). The authors conclude that further research is required to enable further understanding of barriers to the implementation of theoretically-informed and evidence based practice in this area (Sibley et al 2011).

Courtenay and her colleagues focused on nurse prescribing for patients with diabetes (Courtenay et al 2009a) and dermatological conditions (Courtenay et al 2009b). The studies involved a sample of extended formulary nurse prescribers employed as either specialist nurses or practice nurses. Each study employed a combination of videotaped consultations between patients and nurse prescribers and interviews with prescribers and other members of the practice team. Patients completed questionnaires following the consultation and a national prescribing competency framework was used in the analysis of the consultations.

Patients valued the communication skills employed by the nurse prescriber highly and found the continuity of care provided beneficial (Courtenay et al 2009a, 2009b). The prescribers' listening skills, the information provided about medicines and their ability to deal with patient emotions were also evaluated positively (Courtenay et al 2009a, 2009b). Doctors and prescribers felt that nurse prescribing allowed safer practice than 'prescribing by proxy' where previously the doctor had signed a prescription initiated by the nurse (Courtenay et al 2009a:317). In both studies the ability to develop a long-term relationship afforded by the nature of the patient's condition was felt to enable the development of rapport and contributed to a more comprehensive assessment of the patient's condition, leading to more appropriate prescribing decisions. It was argued that the combination of holistic assessment

and the nurses' prescribing expertise meant that decisions were more likely to be consonant with the patients' everyday lives (Courtenay et al 2009b). However observation of consultations showed that patients were not always involved in decision-making and information about side effects was not discussed consistently. Prescribers in Courtenay et al's (2009b) study consistently neglected to enquire about the patient's use of over-the counter medicines and use of herbal medicines. It is argued however that such issues may have been considered in previous consultations and it is important that methods are used which are sensitive to consultations over time (Courtenay et al 2009a).

Weiss et al (2013, 2014) compared general practitioner, nurse prescriber and pharmacist prescriber consultations through analysis of audio-tapes of the consultations and post-consultation questionnaires completed by patients. Consultations took place in either open clinics focused on acute conditions or clinics focused on the management of a particular long-term condition. Pharmacist prescribers were involved in the long-term conditions clinics only. General practitioners conducted shorter consultations in which a greater number of open questions were asked, particularly in relation to solicitations exploring the patient's agenda for the consultation. Potentially in response to the greater use of open questions, patients generally shared more concerns with the GP compared to both nurse and pharmacist prescribers who tended to ask more closed questions. Pharmacist prescribers were less likely to ask opening solicitations thus the patient's agenda was not established at the beginning of the consultation (Weiss et al 2013). Aspects of shared decision-making demonstrated by each group of prescribers and their relationship with patient reports of outcomes, adherence and perceptions of practitioner empathy were also investigated (Weiss et al 2014).

Using data obtained from the same study, Riley et al (2012) investigated the extent to which each group of prescribers were able to recognise and respond to cues and concerns raised by patients. Analysis suggested that shared decision-making occurred to only a limited extent with only a quarter of patients being offered a rationale for their treatment or any choice in its nature. Patient views about treatment were sought in a limited number of consultations and patients did not generally volunteer such information. Both nurse and pharmacist prescribers were however more likely to identify and respond to cues and concerns raised by patients than G.P. prescribers (Riley et al 2012). Pharmacists were more likely to offer treatment options than the nurses or GPs but overall rates remained low. There was some evidence that a longer time spent discussing treatment options was

associated with greater patient satisfaction, enhanced self-reported adherence and patients were more likely to report the prescriber as empathetic. However, whilst pharmacists had significantly longer consultations than nurses or GPs, patients seen by nurse prescribers reported higher levels of satisfaction. The majority of patients also reported that they experienced their preferred decision-making process within the consultation, with 56% of patients preferring a passive role rather than being actively involved in decision-making. This position was particularly likely amongst older, male patients. Thus, whilst both nurse and pharmacist prescribers were more likely to identify and respond to cues and concerns raised by patients than G.P. prescribers, no group of prescribers encouraged shared decision-making. Patients were however generally satisfied with the decision-making process they experienced (Riley et al 2012).

In summary there are relatively few studies that have examined the encounter between patients and nurse or pharmacist prescribers. Findings generally indicate that prescribers facilitate patients' involvement in the consultation to a limited extent. There is some disparity between prescriber perceptions of the extent to which they enable partnership with the patient and actual practice, suggesting that empirical investigation of this area should involve direct observation of practice. Patient perceptions of encounters with nurse and pharmacist prescribers were generally positive.

## **2.4 Summary and conclusions**

In recent years non-medical prescribing has been actively supported by the UK government as part of its modernisation agenda. Nurse and pharmacist prescribers now have almost equivalent prescribing rights to doctors and this has enabled their greater involvement in the management of patients with a range of long-term conditions. There is a developing research literature in the field and evaluative studies, frequently involving survey methodology, have found that independent prescribing by nurses and pharmacists is evaluated positively by patients and other health professionals, including doctors, although there are some concerns about prescribers' pharmacological knowledge and diagnostic skills. Most studies however suggest that non-medical prescribing is safe and enhances patient care although there is some concern amongst nurses that the prescribing role requires them to adopt the medical model in practice.

There is limited evidence relating to the ways in which the patient's use of medicines is managed within the non-medical prescribing encounter. A small number of reviews of prescribing consultations have generally found that, whilst some information is given about the patient's condition and any prescribed medicines, there is little involvement of the patient in decision-making and the risks and benefits of treatment are not always explored. It has been argued that the failure to share such information, which would enable the patient to make a fully informed decision about their treatment, demonstrates practice which seeks obedience to the biomedical view rather than a partnership approach. Patients however generally report that they are satisfied with the consultation and feel they have been involved in decision-making about their treatment although Latter et al (2010) suggest that patients generally have low expectations about participation in interactions with health professionals.

Differences between nurses' accounts of practice and that which is carried out suggest that direct observation of practice is essential in any study of this area, since self-report measures would lead to inaccurate understanding. It is also important that study of the prescribing encounter involves a research approach which allows an in-depth exploration of the complexities of the prescribing encounter and the ways in which the patient's use of medicines is facilitated within the non-medical prescribing encounter.

In conclusion the increasing involvement of nurse and pharmacist prescribers in the independent management of patients with a long-term condition, together with the safety of their practice and its positive evaluation by patients and other healthcare professionals, means that the role of nurse and pharmacist prescribers in facilitating the patients' use of medicines requires further exploration. It is essential that the study involves direct observation of prescribing practice.

The following chapter will examine the substantial body of knowledge focused on the patients' use of medicines to identify issues and themes relevant to the non-medical prescribing encounter.

### CHAPTER 3: PATIENTS' USE OF MEDICINES

The previous chapter examined the context of the current study in terms of the development of the non-medical prescribing role and the developing evidence base concerning its safety and acceptability to a variety of stakeholders, including patients with a long-term condition who are increasingly likely to be managed by a prescriber who is not qualified as a doctor. It concluded that the role of nurse and pharmacist prescribers in facilitating the patients' use of medicines requires further exploration. This chapter explores the study's context in relation to the nature and extent of patients' use of medicines and the evidence for the general ineffectiveness of the range of interventions that have been examined. The concepts of compliance, adherence and concordance which are used to define the issue are critically examined.

Each concept places an emphasis on the encounter between patient and prescriber although the nature of the encounter can be defined as one of medical dominance and asymmetry or of shared decision-making between the patient and professional. The literature is examined to illustrate each concept and to assess its application to the role of the nurse and pharmacist prescriber. It is argued that the operation of power within the non-medical prescribing encounter is likely to be more varied and subtle in its manifestation than the binary distinction between powerful and powerless usually presented in the literature. Whilst shared decision making can be justified in ethical terms, there is mixed evidence about its outcomes and the extent to which patients and professionals adopt this approach in practice. There is however a lack of clarity about the extent to which it might influence power and asymmetry within the patient-practitioner encounter. Alternative constructions of power derived from a post-structuralist perspective are examined to assess their potential utility within the current study.

The research focus for the current study is justified and the research question and aims/objectives are re-stated. The adoption of a methodological approach sensitive to the ways in which nurse and pharmacist prescribers construct the issue of patients' use of medicines is proposed due to the complexity of issues involved and the limited knowledge in this area. The methodology adopted is then explored in chapter 4.

### **3.1 The extent and nature of patients' use of medicines**

This section provides an overview of the nature of patients' use of medicines, highlighting the extent to which medicines are frequently not taken in the way intended by the prescriber. It is an area that is characterised by a significant number of studies, generally positivist in nature and which usually define the issue of patients' use of medicines relatively narrowly as one of compliance or adherence to the prescribed regime. Since such issues are discussed only to provide the background to the study, the discussion draws mostly on published systematic reviews of the literature, several of which have been recently published.

The difficulty that patients have in taking medicines in the way that they are prescribed has long been recognised with Hippocrates reportedly suggesting that 'patients often lie when they state that they have taken certain medicines' (cited in Haynes 1979:2). There is considerable research evidence that patients do not take medicines as prescribed with some patients never having their prescription dispensed, others taking less than the optimal dose and some stopping the medicines in the first few months after prescription. Other problems identified in the literature include irregularities in the timing of drugs and patients omitting one or more doses. A relatively small number of patients take more medicines than required by the prescription (Britten et al 2004, Haynes et al 2008, Osterberg & Blaschke 2005, Ryan et al 2014). In developed countries only around 50% of patients take their medicines as prescribed (Hovstadius and Petersson 2011, Vermeire et al 2001, WHO 2003). There appears to be 'no evidence for substantial change [in such figures] in the past 50 years' (Nieuwlaat et al 2014: 3). The issue is particularly significant in developing countries where associated difficulties with access to health care services mean that a sub-optimal use of medicines by patients can severely limit the effective management of long-term conditions (Horne 2006).

It is an issue that is found in patients with a variety of conditions and does not appear to be influenced by the type or severity of disease (Demonceau et al 2013, Haynes et al 2008, Vrijens et al 2012). The clinical and economic consequences of patients not taking medicines as prescribed are significant including an increased use of health services, greater health care costs and an adverse effect on patient outcomes, including greater mortality (Demonceau et al 2013, Haynes et al 2008, Ryan et al 2014, Vrijens et al 2012).

There is no agreement about the level of medicines' use that is considered adequate and no gold standard measurement of adherence (Osterberg & Blaschke 2005). Definitions of the acceptable level of medicines' use therefore varied between studies and a variety of measures were used to assess its extent including prescription refill rates, pill counts and physiological indicators of drug use although patient self-report measures were used more frequently (Haynes et al 2008, Nieuwlaat et al 2014, Playle & Keeley 1998, Vrijens et al 2012). The variation in definitions found between different studies means that comparison of interventions is difficult and a number of difficulties have been reported with each of the different measures (Greene 2004, Haynes et al 2008, Nieuwlaat et al 2014, Playle & Keeley 1998, Vrijens et al 2012).

The dominance of positivist studies within this field has led to a focus on the identification of objective external variables that contribute to sub-optimal use of medicines (Playle & Keeley 1998) and extensive research has demonstrated the influence of a wide range of factors on the patient's ability and willingness to take prescribed medicine (Kardas et al 2013, Vermeire et al 2001, WHO 2003). The World Health Organisation (2003) suggested five categories of factors that influence patients' medicines use including socio-economic factors, health care team and system factors, together with patient factors and those associated with the condition or treatment. In relation to condition and treatment factors, the presence of a long-term condition and complexity of the prescribed medication regime were factors that were consistently associated with reduced medicines' use (Vermeire et al 2001). A recent review however highlighted the multiplicity of factors influencing patients' use of medicines in that 771 individual factors were identified together with between six and fourteen clusters of influences for each of the categories identified by the World Health Organisation (Kardas et al 2013). Whilst a significant number of patient characteristics have been associated with their use of medicines, Horne (2006: 68) emphasised that the 'notion of a typical nonadherent patient is something of a myth: most of us are nonadherent some of the time'.

A similarly complex picture has emerged from the studies examining the interventions that can influence patients' use of medicines. A systematic review of interventions resulting in improvements in at least one clinical outcome (Haynes et al 2008) identified that whilst 36 of 83 interventions led to an enhanced use of prescribed medicines, only 25 had an associated improvement in clinical outcomes. Interventions were often complex, particularly those associated with long-term conditions and included, amongst others, patient education and support packages

from a variety of professionals, different forms of reminders to patients and counselling or therapeutic interventions. Most of the improvements in medicines' use and patient outcomes were however small and were frequently short-lived. An update of the review (Nieuwlaat et al 2014) included a large number of new studies and demonstrated a significant heterogeneity amongst the interventions which prevented any classification of the intervention types. The potential value of allied health professionals such as nurses and pharmacists in supporting and counselling patients was noted although studies investigating their involvement were frequently characterised by bias or other limitations. Further research was recommended to fully assess their value. Overall however the studies included in the review were again characterised by the complexity of the interventions used and the small improvements in adherence or treatment outcomes. The authors suggest that the complexity of many of the interventions means that they would be difficult to implement in normal practice settings (Nieuwlaat et al 2014).

The research field is frequently criticised for the methodological limitations apparent within many studies including inappropriate sample size, inadequate measures to control bias and the use of different measures of compliance/adherence, making comparisons between studies difficult (Demonceau et al 2013, Haynes 2006, Haynes et al 2008, Nieuwlaat et al 2014, Kardas et al 2013, Ryan et al 2014). It has been argued that the literature provides little consistent information other than to confirm that some people do not do what the doctor expects (Bissell et al 2004). Throughout the literature there is also a focus on measures of patients' medicines use alone, providing a narrow perspective together with a paternalistic, medical approach in that the research evaluates a strategy determined by the professional, with little consideration of patient beliefs and preferences (Horne & Weinman 2004, Ingadottir & Halldorsdottir 2008, Latter et al 2007a).

Several studies conducted within the qualitative tradition have enabled a greater understanding of patients' experience of taking medicines on a regular basis for a long-term condition and of issues that are a potential influence on patients' use of medicines (Ingadottir & Halldorsdottir 2008). The qualitative literature does not generally focus on patient compliance or adherence with the term 'patients' use of medicines' being used in preference since it reflects its interest in the broad range of issues associated with medicines and their use (McCoy 2009). This term was also adopted in the current study as it focused on the range of ways in which

patients and nurse/pharmacist prescribers might manage medicines rather than measurements of patient behaviour.

Qualitative studies have highlighted the ways in which people strive to live with their condition and lead a normal life despite fears about the consequences of living with a long-term condition (Adams et al 1997, Carpenter 2005, Ingadottir & Halldorsdottir 2008, Paterson & Thorne 2000). Taking medicines could have an impact on identity, with patients believing that they experienced stigma, leading to reluctance to disclose their use of medicines (Pound et al 2005, Townsend et al 2003). A feeling of powerlessness could be associated with living with a long-term condition (Aujoulat et al 2007). Patient beliefs about health and illness often contributed to difficulties in patients' use of medicines (Gadkari & McHorney 2012) and a reluctance to take them due to major concerns about side effects, tolerance and dependence was often found (Pound et al 2005, Townsend et al 2003). Patients accepted their use of medicines on either a passive or active basis or they could reject them. Active acceptance of medicines often involved patient attempts to minimise their use of medicines through, for example, adjusting doses to minimise unwanted consequences or to make their use more acceptable although patients did not generally discuss any changes they made to medications with their doctors (Pound et al 2005). Taking medication on a regular basis could also be interpreted as a form of work which dominated the daily routine (McCoy 2009). There is however some evidence that patients' use of medicines was affected by a complexity of factors including understanding, risk and perceived need which can interact and lead to an unpredictable pattern of medicines' usage over time (Salter et al 2014).

There are therefore several factors which influence patients' use of prescribed medicines and a number of interventions designed to enhance medicines' use have been investigated. The interventions are generally complex, limiting their implementation in the practice setting particularly as benefits are small and short-lived. The research field is characterised by a number of methodological limitations including the range of definitions and measures of medicines' use employed within studies. Whilst the positivist literature offered a narrow focus on measured compliance/adherence alone, qualitative research enabled understanding of the patients' experience of using medicines on a regular basis for a long-term condition.

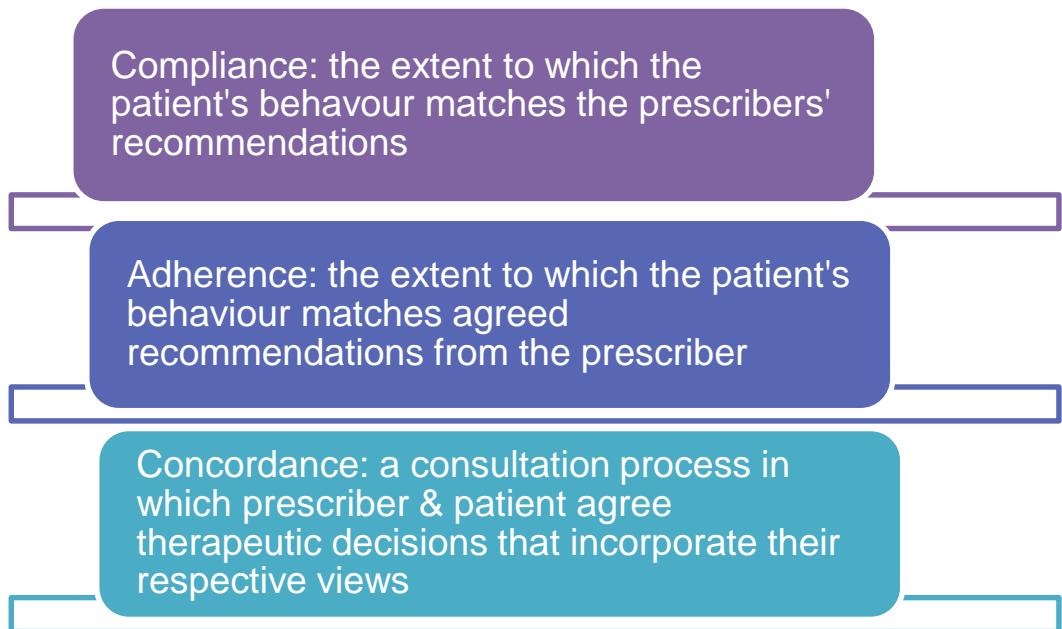
Review of the literature however demonstrated the variety of ways in which patients' use of medicines is defined and conceptualised leading to a number of different

constructions of the relationship between the patient and prescriber. The following section examines the concepts which are used regarding patients' use of medicines. These include compliance and adherence which, it is argued, construct the relationship as one in which power rests with the prescriber, creating asymmetry within the encounter. The asymmetry can be explained using frameworks such as functional theory (Parsons 1951), the humanist critique of medicine (Mishler 1984, Waitzkin 1991) and the post-structuralist conceptualisation of power outlined by Foucault (1980b, 1980c, 1980d, 1991). Each of the frameworks are critically explored. Alternatively patients' use of medicines can be constructed as one of concordance or shared decision-making by the patient and prescriber, suggesting a more equal power distribution within the encounter. The concepts are critically examined and it is argued that there is a need for further examination of the ways in which nurse and pharmacist prescribers work with patients regarding their use of medicines. Definitions of the concepts of compliance, adherence and concordance are first explored.

### **3.2 Defining patients' use of medicines: Compliance, adherence and concordance**

A number of terms are used to define the different aspects of the process followed when patients receive a prescription, have it dispensed and then use the prescribed medicines (Vrijens et al 2012). These include compliance, adherence and concordance. Several definitions of each term exist, reflecting the different perspectives found within the biomedical, ecological and behavioural disciplines involved in this area and inconsistencies remain in the way patients' sub-optimal use of prescribed medicines is described (Vrijens et al 2012). There are a number of descriptive frameworks (ABC Project Team 2012, Horne et al 2005, Vrijens et al 2012), which include additional terms such as initiation and persistence to fully describe the different stages involved in the process of medicines' use. Such frameworks are frequently very detailed to enhance the rigour and consistency of research in this area and the level of detail involved in such frameworks was not thought to add to the analysis presented here. The definitions that are instead used in the analysis are outlined in figure 3.1 below. They are taken from Nunes et al (2009), national guidance in England and Wales about enhancing patients' use of medicines. An overview of the definitions is first provided, highlighting some of the issues that are apparent within each definition. The ways in which each definition conceptualises patients' use of medicines are then critically reviewed.

Figure 3.1 Definitions of compliance, adherence and concordance



Source: Nunes et al (2009: 31).

### 3.2.1 Compliance and adherence

The term compliance suggests a position in which the role of the patient is one of following the prescriber's advice with no acknowledgment of their participation in the decision-making process. Its use became widespread within the medical literature from the 1950s onwards (Greene 2004, Playle & Keeley 1998). The term has however been widely criticised since it is believed to be paternalistic and denies self-regulation by patients (Conrad 1985, Donovan & Blake 1992) although its use is still evident in the literature (Cushing and Metcalfe 2007, Horne & Weinman 2004).

Adherence became the preferred term from the mid-1980s since it was thought to acknowledge active decision-making on the part of patients, overcoming the difficulties found with the term compliance (Greene 2004, Ley 1982, Horne and Weinman 2004). Some authors suggested that non-adherence can be intentional or unintentional (Horne et al 2013, Hugtenberg et al 2013, Lehane & McCarthy 2007). Intentional non-adherence was viewed as a rational decision taken by patients about their medicines based on their beliefs about the necessity of a medicine and their active consideration of the risks and benefits of the treatment (Horne 2006, Horne et al 2013, Hugtenberg et al 2013). Emphasis was therefore placed on the communication skills of the prescriber to enable a full understanding of the patients'

reasoning and provide appropriate counselling to enable the patient to achieve an informed decision. Unintentional non-adherence is a passive process that occurs due to a lack of capacity or the resources necessary to support patients' use of medicines such as forgetting to take them, being unable to open packaging or not understanding how they should be used. The prescriber's role is therefore one of educating the patient or in recommending practical strategies to enable medicines' use (Blenkinsopp 2004, Hugtenberg 2013). Some authors do not however distinguish different forms of non-adherence (Nunes et al 2009, Vrijens et al 2012).

Greene (2004) suggested that the change in terminology did not mean there was any resolution of the difficulties associated with the term compliance. Several authors have argued that the concept of adherence still maintained some of the assumptions implicit in compliance, leading to patients who use medicines sub-optimally being seen as difficult and their behaviour being described in negative terms (Fawcett 1995, Greene 2004, Playle & Keeley 1998). Some authors suggested that the terms compliance and adherence can be used interchangeably although they caution they should be used in a value-free way (Horne & Weinman 2004, Mykhalovskiy et al 2004, Vrijens et al 2012). Compliance and adherence are also treated as synonymous within the discussion presented here since both concepts share a focus on patient behaviour and have stimulated considerable research interest, mostly involving positivist studies focused on the extent to which patients take medicines as prescribed as the principal outcome measure. The arguments presented that medical dominance and paternalism are inherent to the concepts of compliance and adherence are examined in section 3.3 following explanation of the term concordance which was proposed to overcome many of the difficulties associated with compliance/adherence (Horne & Weinman 2004, Shaw 2004). A focus on shared decision-making rather than concordance was later proposed by Nunes et al (2009) and further analysis of both concepts is then offered in section 3.4.

### 3.2.2 Concordance

Consideration of the difficulties found with definitions of compliance and adherence was undertaken by a working group established by the Royal Pharmaceutical Society of Great Britain (RPSGB 1997), which outlined the concept of concordance. Concordance described a new approach to decisions about medicines based on an equal relationship between the prescriber and patient in which there was respect for the patient's beliefs and wishes, so that a negotiated agreement could be reached

about the use of medicines (Britten & Weiss 2004, Horne and Weinman 2004, Horne et al 2005, Jordan et al 2002). It was acknowledged that one possible outcome of concordance was that a patient decided to reject a prescribed medication and Britten & Weiss (2004) argued that the acceptance of the patient's decision, even if it involved rejection of the medicine, was actually central to the concept.

Further work on the concept was undertaken by the Medicines Partnership, established by the British government in response to the RPSGB report (Shaw 2004). A model was developed focused on the nature of the consultation necessary to enable a prescribing decision based on partnership, the knowledge required by patients to act as partners and the support necessary to enable the appropriate use of medicines. A fourth element was later added which focused on the extent to which prescribers are prepared to allow patients to be partners (Shaw 2004). Concordance therefore placed a new emphasis on negotiation and partnership between the prescriber and patient so that an agreement, in which the patient's decision prevailed, could be reached about prescribed medicines (Horne & Weinman 2004, RPSGB 1997).

Nunes et al (2009) however argued that the concept addressed the consultation process only since it did not focus on any aspects of patients' actual use of medicines. The meaning of the concept also appeared to have changed from its original focus on the consultation process only to a broader emphasis on communication and support for patients using medicines (Horne et al 2005, Nunes et al 2009). As the concept was difficult to operationalise with no agreement about ways in which the degree of concordance within a consultation could be judged, Nunes et al (2009) recommended that the term adherence alone should be used to refer to patients' actual use of medicines. Their preferred term for the consultation process was 'shared decision-making about medicines' (Nunes et al 2009:59) although Britten & Weiss (2004) have argued that concordance can occur without shared decision-making since patients may prefer that the prescriber make decisions on their behalf. Further consideration of the concepts of concordance and shared decision-making about medicines is offered in section 3.4 below. The following section however critically examines the conceptualisation of compliance and adherence.

### 3.3 The concepts of compliance and adherence

This section examines the concepts of compliance and adherence, exploring how they came into prominence in the mid-twentieth century, suggesting they developed as social constructs (section 3.3.1). In turn, the prescribing encounter is characterised as one of asymmetry, placing the patient in a deviant and passive role (Greene 2004, Playle & Keeley 1998, Snowden 2008). The theoretical assumptions underpinning such positions are critically reviewed (section 3.3.2). There are a significant number of research studies that have demonstrated asymmetry in the doctor-patient encounter and these are explored in section 3.3.3, together with the research methodologies commonly adopted in this field. The extent to which asymmetry is evident in patient encounters with nurses or pharmacists is also examined.

#### 3.3.1 Compliance and adherence as social constructs

It has been noted that the term compliance was used infrequently in the literature until the middle of the twentieth century (Greene 2004, Playle & Keeley 1998) although early records show that there was recognition that patients did not always follow medical advice. In common with Hippocrates' suggestion that patients frequently lied about their behaviour, earlier descriptions of patients who did not behave as recommended similarly employed 'derisive terminology' (Lerner 1997: 1424). Homeless, alcoholic men with tuberculosis (TB) were, for example, described as 'friendless, dependent, dissipated and vicious consumptives' (Foster 1905 in Lerner 1997:1424). Such descriptions reflected value judgements made about the men rather than being a statement about relevant public health concerns and Lerner (1997) suggests that the men's situation came to be conflated with the wider societal problems of immigration, poverty and overcrowding that affected the United States at that time. During the 1950s and 1960s, patients who did not follow medical advice were commonly described as 'recalcitrant' suggesting that the patients' disobedience and challenge to medical authority had now become the focus for censure of such patients (Lerner 1997: 1525).

The term compliance began to be used around the mid-twentieth century with patients who did not follow medical advice being described as non-compliant since it was expected they would be passive recipients of advice from an authoritative medical source (Greene 2004, Playle & Keeley 1998, Snowden 2008). This increased interest in patient compliance has been attributed to the increased availability of effective medicines such as antibiotics and major tranquillisers

(Greene 2004, Haynes 1979, Lerner 1997, Playle & Keeley 1998). Patients' appropriate use of such effective medicines was therefore perceived as essential and non-compliance became a major concern. The behaviour of patients who did not take the medicines as prescribed was seen as irrational and a form of deviance (Lerner 1997). A developing research base at that time also illustrated the extent to which patients did not comply with medication regimes such as the use of antacids for stomach ulcers. Such patients were less visibly deviant than alcoholic patients with tuberculosis or the mentally ill who had previously been the main focus in the literature, thus allowing the issue of non-compliance to 'stake a claim in the centre of middle-class medical practice' (Greene 2004:331). The concept began to be applied in many therapeutic areas.

The emergence of compliance as a major focus for medical and other professionals is an example of a 'historically-specific phenomenon' in that it emerged at a particular time and its use was consolidated through operational definition and development of a significant literature in the 1970s (Greene 2004: 328-329, Haynes 1979). Greene (2004) suggests that the identification of useful therapies was not central to the development of the concept since concerns about TB patients who did not follow medical advice existed long before the advent of effective drugs for the condition and yet such patients were not described as non-compliant. Whilst the author did not describe the development in such terms the concepts of compliance/adherence can therefore be seen as socially constructed. Theoretical frameworks used to both explain and critique the concepts are examined in section 3.4.2 below

### 3.3.2 Theoretical frameworks and compliance/adherence

Theoretical frameworks employed within analyses of patients' use of medicines as compliance or adherence include the structural functionalist theory of Talcott Parsons (1951) and the framework of medical power and ideology derived from Marxist perspectives and liberal humanism (Lupton 1997). Mykhalovskiy et al (2004) have argued however that these frameworks are not able to explain fully the different interacting forms of power that are evident in contemporary health care and suggest that a post-structuralist framework based on the writings of Foucault (Foucault 1980b, 1980c, 1980d, 1988, 1991) enables a more comprehensive explanation. Each of these approaches is considered in turn in sections 3.3.2 (i), 3.3.2 (ii) and 3.3.2(iii).

### 3.3.2 (i) *Compliance/adherence: A structural functionalist approach*

Early analyses of compliance were based on an ‘assumption that doctor and patient recognize and accept their reciprocal role obligations as healer and sick person, respectively, so that appropriate role behavior on the part of the professional healer is assumed to evoke automatically the appropriate response (compliance) from the sick person’ (Milton & Eichhorn 1963: 241). This statement reflects Parsons’ (1951) view of the normative expectations that defined the sick role (Bradby 2012, Varul 2010). Frequently cited in social scientific analyses (Varul 2010), Parsons’ theory viewed ill-health in functional terms in that it disrupted the individual’s ability to perform expected social tasks (Varul 2010). Ill-health was therefore a socially deviant position since it had the potential to disrupt the wider stability of society (Bradby 2012, Varul 2010).

For Parsons, the socially prescribed roles of doctors and patients were the mechanism through which illness was controlled so that the social system was not disrupted (Morgan 2008). Sick individuals had the right to be exempt from role expectations such as paid employment although, in turn, they were required to meet a number of expectations including that professional medical advice would be sought and they would co-operate with the doctor. Of particular importance was the expectation that the sick individual should want to get well as quickly as possible since the sick role was only temporary (Bradby 2012, Morgan 2008, Varul 2010). Patients who did not comply with prescribed medicines or other treatment recommendations were viewed as socially deviant and culpable in that they contravened the expectations of the sick role (Bradby 2012). There are several examples in the compliance and adherence literature of the use of language that signified the behaviour of patients who are not using their medicines correctly as irrational, deviant or that it is a problem (Playle & Keeley 1998).

Parsons’ (1951) theory outlined a number of reciprocal obligations on the part of doctors, such as an expectation that they should apply a high level of professional skill and knowledge to the patient’s problems and always act to enhance patient welfare and not their personal interests. Patient behaviour should also be judged objectively and not in terms of personal value systems. The rights granted to doctors in fulfilling societal expectations of their role was that they had considerable autonomy within their professional practice and that they occupied a position of authority in society relative to the patient (Morgan 2008). The doctor’s authority is

however viewed as benevolent within the functional approach and the resulting asymmetry and imbalance of power is not seen as a problem (Lupton 2003).

Parson's sick role theory was developed in relation to acute conditions and its position regarding those with a long-term condition is unclear (Bradby 2012). Varul (2010) however suggested that Parsons' later work on the sick role (Parsons 1978) was able to account for the position of those with a long-term illness since it involved the moral economy surrounding health and illness. In accordance with this, Varul (2010) suggested, patients with a long-term condition still need to demonstrate a return to normal roles, despite the consequences of living with their condition. Whilst the sick role will normally allow the individual to withdraw from their social responsibilities this cannot be allowed to occur in the longer term in a society oriented to achievement. The individual living with the long-term condition also requires the opportunity to achieve social esteem through engagement, directly or indirectly, in the economic exchange that characterises society (Varul 2010).

Thus both the 'moral order of the social system and the individual need-dispositions geared to autonomy and recognition' (Varul 2010: 83) contribute to a situation in which individuals need to engage actively with the management of their condition to ensure that risks to their functional capacity are minimised so that they can continue to contribute to society. The person with a long-term illness therefore needs to live within both a sick role and their normal role, a demanding situation in which they are expected to balance the sometimes conflicting needs of each role, with the risk of either being seen as irresponsible if they engage too actively in their normal role or 'malingeringers' if they allow the demands of the sick role to prevail (Varul 2010: 85). Compliance to their medical treatment is therefore particularly emphasised for patients with a long-term condition although this needs to be balanced with the demands of their everyday social roles, involving a difficult negotiation of the boundaries between the sick role and the moral responsibility to live normally. There is some evidence of this tension in the literature relating to patients' use of medicines since patients consistently prefer medicines that are compatible with their daily routines and examples of non-compliance can often be seen as logical and reasonable when examined in the context of patients' everyday lives (Donovan & Blake 1992, Stewart & DeMarco 2010).

Whilst Parsons' theory therefore appears able to explain the situation of patients with a long-term condition it has further limitations particularly in relation to its neglect of human agency and its support for medical authority (Bradby 2012,

Morgan 2008). His theory appears to reject any possibility of patient agency and the power and status invested in doctors by society is accepted within Parson's model since they maintain social order through regulation of the deviance inherent in the sick role (Bradby 2012). The asymmetrical power relations arising from such medical power were a focus for critique within the 1960s and 1970s as part of wider social movements that questioned the dominance of powerful, high-status occupations (Lupton 1997). The arguments presented are examined in section 3.3.2(ii) below.

### *3.3.2(ii) Compliance/adherence: Medical dominance and power*

The critique of medical power and dominance was a central concern within the sociology of health and illness from the 1970s onwards (Lupton 1997). Early proponents of the critique such as Friedson (1970), Zola (1972) and Illich (1975) argued that medicine, through its increasing power and influence, served to limit the autonomy of individual patients in managing their own health care thus creating a form of dependency on the profession which, in turn, adds to its power and influence. The increasing involvement of medicine in problems that could also be defined as part of life or human existence in general similarly contributed to medicine's increasing domination and influence (Parens 2011). Both Marxist theory and liberal humanist ideals, which underpin such views, are opposed to the domination of one group of individuals by another although the associated ideals and mechanisms of domination differ in each approach (Bradby 2012).

Playle & Keeley (1998) argued that medicine's dominance underpinned the emergence of patient compliance as a significant focus for biomedical attention during the 1950s. The effectiveness of drug therapies discovered at that time was only part of the reason for its emergence since professional self-belief amongst the medical profession fashioned judgements about the value of prescribed medicines as much as the scientific evidence available (Playle & Keeley 1998). Medical knowledge was generally unquestioned by patients since it was legitimised and reinforced through legislative measures and was seen as 'inherently credible' because of the social status of doctors. The authors argued the concept of compliance 'implicitly requires a dependent lay person and a dominant professional; one giving expert advice, suggestions or orders, and the other carrying them out' (Playle & Keeley 1998: 306). Compliance/adherence, it was argued, therefore serve an ideological function in that they 'provide a framework for doctors to express their

ideas about how patients *ought* to behave (Bissell et al 2004: 851, emphasis in original, Britten 2001, Playle & Keeley 1998, Trostle 1988).

Medical power and dominance are central to the humanist critique of compliance/adherence (Mykhalovskiy et al 2004). Within this critique it is argued that doctors generally assume a dominant, paternalistic position in any encounter with a patient, determining the agenda for discussion and allowing the patient very few opportunities to initiate topics (Mishler 1984, Waitzkin 1991). Mishler (1984), drawing on Habermas' Communicative Action Theory, argued that doctors generally adopt a biomedical discourse in the encounter, described as the 'Voice of Medicine', where voice is the 'realization, in speech, of underlying normative orders' (Mishler 1984: 103). Such a discourse is the voice of the system which emphasises strategic action focused on success and efficiency (Harvey & Koteyko 2013). It is characterised by an interrogative structure with questions, usually closed, posed by the doctor who then evaluates the response given by the patient before raising a further question. Any reference to the context of the patient's problems tends to be ignored.

In contrast, patients adopt the 'voice of the lifeworld', which is focused on everyday experience and seeks communicative action and mutual understanding (Harvey & Koteyko 2013, Mishler 1984, Silverman 1987). Consideration of patients' lifeworld perspective allows greater recognition of their autonomy and means that they are able to participate in decision-making (Barry et al 2001, Leanza et al 2013, Harvey & Koteyko 2013, Silverman 1987).

Such a critique has however been criticised in its own right as it does not acknowledge the contribution that medicine makes to patient well-being or that people submit themselves willingly to such domination. Rose (2007: 701) for example points out that 'doctors do not force diagnostic labels on resistant individuals'. The assumption of universal passivity on the part of patients also denies the evidence that patients do not always follow medical advice (Atkinson 1995, Lupton 1997, Rose 2007). The later development of the concept of adherence also showed that medicine was sensitive to issues of power in the patient-doctor encounter which was not acknowledged within arguments that implied there was a 'monolithic erasure of the patient' in medicine's approach with patients (Mykhalovskiy et al 2004: 322).

Mykhalovskiy et al (2004) suggested that the humanist critique of compliance and adherence did not reflect the operation of power arising from contemporary

developments in health care such as the greater emphasis on individual responsibility for self-management of long-term conditions and the growing consumer-based health movement. They suggested that this situation involves multiple forms of power, a situation which is best explained through the writings of Foucault (1980a, 1990). Their arguments are presented below.

### *3.3.2(iii) Compliance/adherence: A post-structuralist perspective on power*

Mykhalovskiy et al (2004) reviewed the development of the humanist anti-medicine critique of compliance/adherence suggesting that, whilst it stimulated research on the doctor-patient interaction and patient experience, it failed to reflect the complexity and heterogeneity of the concept of compliance apparent in biomedical research in this area. The research demonstrated conflicting results regarding, for example, the relationship between socio-demographic characteristics and use of medicines. The humanist critique of compliance was, they suggested important to sociology since it allowed the discipline to reframe its relationship with medicine although, in many ways, it became 'trapped by the object of its critique' (Mykhalovskiy et al 2004: 322) in that, whilst it criticised medical dominance and the objectification of the patient that occurred within compliance, there was no reformulation of the basic problem. The objective of study remained non-compliance although patients' definitions of the situation were offered in explanation. The critique also failed to give attention to the interdiscursive elements of compliance seeing it as a medical concept alone.

Drawing on Foucault's conception of multiple forms of power (Foucault 1980a, 1990) and findings from a study of patients with HIV/AIDS, Mykhalovskiy et al (2004) argued that power within the doctor-patient encounter was not held by doctors alone but involved the interplay of different forms including medical authority, public health, patients and patient organisations. Whilst participants frequently demonstrated that they modified their prescribed medication schedule, as reported in other studies (Pound et al 2005), discourses related to compliance/adherence were consistently used and nearly all participants made sense of taking medicines in terms of the requirements regarding adherence (Mykhalovskiy et al 2004). Whilst patients also used discourses derived from psychology, AIDS patient organisations and social work, adherence discourses were commonly used as an interpretive framework through which participants discussed their relationship to the required treatments (Mykhalovskiy et al 2004). For many participants engagement with adherence discourses was clearly seen as

a means of overcoming the challenges of their situation through self-knowledge and self-management. Compliance/adherence therefore formed part of the project of realising the self (Mykhalovskiy et al 2004).

The writings of the French intellectual, Michel Foucault, are explored in section 3.5 below to expand and illustrate the points raised by Mykhalovskiy et al (2004) and also to develop later arguments. The following section will review the considerable research evidence demonstrating asymmetry in encounters between doctors and patients and the limited literature in this area focused on nurse and pharmacist encounters with patients.

### 3.3.3 Asymmetry in the patient encounter

Research on the doctor-patient interaction, conducted in a number of developed countries over the last 40 years has continued to demonstrate that the doctor-patient encounter is a site of medical dominance and asymmetry (Pilnick & Dingwall 2011). Two main research traditions have been identified in this area involving either process analysis or microanalysis of discourse (Heritage & Maynard 2006a, 2006b). Both traditions emphasise the importance of a collaborative model of doctor-patient interaction (Pilnick & Dingwall 2011).

Process analysis involves a detailed and highly structured quantitative analysis of the interaction using validated tools such as Bales' Interaction Process Analysis or the Roter Interaction Analysis System (Heritage & Maynard 2006a). It can be argued that such models however enable a doctor-centred view rather than one focused on the patient since they take minimal account of the context or content of each medical visit and focus on medical outcomes only (Heritage & Maynard 2006a, 2006b). Studies using process analysis have however shown the potential for systematic examination of the doctor-patient interaction as 'it is conducted in real-time', which is essential for the development of a theoretical formulation of the relationship (Heritage & Maynard 2006a: 354). An early study involving process analysis, conducted in the UK, was able to identify the dominance of the doctor within the interaction and the ways in which this compromised the therapeutic potential of the encounter (Byrne & Long 1976).

Studies involving microanalysis of discourse within the interaction tend to employ a qualitative ethnographic approach although an increasing number of studies are using conversation analysis, a research approach which has been developed more recently. Both approaches involve researchers in conducting a line-by-line analysis

of the recorded interaction (Heritage & Maynard 2006b, Pilnick & Dingwall 2011) although their underpinning assumptions are very different. The ethnographic approach to microanalysis is focused on the dominance of the doctor in encounters with patients with social and organisational factors such as status, authority, education and gender being used to explain its presence (Pilnick & Dingwall 2011). Thus Mishler (1984) and Waitzkin (1991), as previously discussed, using a microanalytic approach, explained the asymmetry found within the doctor-patient encounter in terms of the role played by doctors in the interests of capital (Pilnick & Dingwall 2011). Several studies of doctor-patient encounters have shown a similar pattern of asymmetry to Mishler (1984). Doctors therefore generally lead the discussion, asking more questions and interrupting the patient frequently (e.g. Barry et al 2001, Mishler 1984).

The focus of conversation analysis is instead the sequential organisation of naturally-occurring interactions and involves a detailed analysis of interaction to identify the actions of both participants with regard to issues such as turn-taking and the ways in which social actions are achieved through the spoken utterances and non-vocal aspects of the encounter. Any asymmetry apparent in the encounter, it is argued, is similarly created within the interaction and not through the operation of power (Heritage & Maynard 2006b). In-depth analysis of the interaction, Heritage & Maynard (2006b) suggest, enables the identification of communicative strategies that can be deployed to resist any negative outcomes identified through conversation analytic studies. Whilst allowing coding at a broader level, conversation analysis also enables statistical analysis of the findings through the measurement of fine details of an interaction such as the length of pauses, intonations and overlapping speech. In this way, it is suggested, conversation analysis enables a verifiable contribution to medical outcomes (Heritage & Maynard 2006a).

Conversation analysis is an approach that is often adopted in health communication research, where it has been used to investigate several aspects of encounters between doctors and patients such as soliciting patient concerns and negotiating treatment decisions (Heritage & Maynard 2006b). It is increasingly used in research focused on patient encounters with other healthcare practitioners and communication within the healthcare team (Pilnick et al 2010). The approach has however been criticised for its inherently positivist nature and the highly-specified emphasis on the details of a conversation alone, meaning that, if there is no discussion of matters such as power within the transcript, the analysis does not

focus on such issues resulting in a ‘textual empiricism’ (Parker 2005:91). Murdoch et al (2013) also argued that their participants’ discussion of their use of medicines was influenced by wider social discourses and not only by the immediate interaction as suggested by conversation analysis.

Asymmetry has been found in studies of nurse–patient interaction (Candlin 2000, Fletcher 2006) and health visitor-parent interaction (Heritage & Sefi 1992). It was however suggested that the asymmetry assumed a more subtle form than within the doctor-patient encounter. Patients therefore appeared to have more control over the agenda although nurses still determined the parameters of the discussion, with patients frequently adopting a passive position within the interaction (Candlin 2000). The extent to which such asymmetry can be explained through reference to the status and power invested in the nursing role by society is however uncertain. It is generally acknowledged that nurses do not have the same status as doctors, instead their history has been characterised by powerlessness and domination (Candlin 2000, Fletcher 2006, Harvey & Koteyko 2013, Lupton 2003).

Pilnick (2004) however found that, in a study of pharmacist encounters with parents in a paediatric oncology clinic, asymmetry in the interaction was generally minimised due to parents’ extensive understanding of the condition and its treatments, gained through their long-term association with the clinic. Task-related asymmetry was however apparent in that pharmacists dominated the discussion at times when their specialist knowledge required them to perform a pharmacist-specific task such as dispensing the medicine. The extent to which such asymmetry is a function of the status of pharmacists is unclear however since Pilnick (2004) points out that, whilst pharmacists have a specialised body of knowledge, they are generally not seen as having the same status as doctors. Pilnick (2004: 389) reaches a similar conclusion to Candlin (2000) suggesting that asymmetries in the pharmacist encounter situation are ‘both less evident, and much more fluid’ than in doctor-patient encounters.

Results from both process analysis and microanalytic studies have contributed to a significant focus on interpersonal skills training within medical education (Heritage & Maynard 2006a, Pilnick and Dingwall 2011). Pilnick & Dingwall (2011:1374) however point out that the asymmetry within the medical and other healthcare encounters is an issue that has ‘remarkable persistence’, despite the significant efforts directed at enhancing practitioners’ communication skills or the use of

strategies designed to empower patients and encourage equal decision making (Lupton 1997).

The authors offer Talcott Parsons' conception of the sick role, as explored in section 3.4.2 (Parsons 1951), as an explanatory framework for the enduring asymmetry, since the patient is placed in a 'double bind' by the obligations within the sick role since they must use their own knowledge and experience in deciding to visit the doctor but are then required to co-operate fully through deference to the doctor's expertise (Pilnick & Dingwall 2011:1380). Any attempt to counter the asymmetry apparent in this situation therefore undermines the patients' ability to meet their obligations within the sick role. The findings from studies of doctor-patient interaction could, they suggest, be easily predicted from Parsons' (1951) theory in that a functional asymmetry is demonstrated at the local level which also reflects the 'wider functionality of the institution of medicine in society' (Pilnick & Dingwall 2011:1381). Research efforts, it is suggested, would be better directed at determining the function and purpose of the asymmetry rather than on attempts to overcome it.

In summary, this section has critically examined the concepts of compliance and adherence suggesting that they are social constructs in which the relationship between patient and prescriber is seen as asymmetrical with power resting with the prescriber. The patient is seen as passive submitting to medical recommendations. Patients who do not follow doctors' advice are seen as deviant. Such asymmetry can be explained using Parson's (1951) functional theory in which medical power is seen to arise from the role played by doctors in maintaining social order or in critical terms in which doctors' power is something to be resisted and diminished. Substantial research supports the presence of asymmetry in the doctor-patient interaction. Research focused on nurses and pharmacists suggests that asymmetry is present in their interactions with patients but it assumes a more subtle and fluid form and is unlikely to be associated with their social status. A recent discussion paper has argued that asymmetry has a 'remarkable persistence' (Pilnick & Dingwall 2011:1374) and research efforts are best directed at understanding its function and purpose.

The following section examines the arguments that suggest the prescribing encounter should be characterised by concordance or shared decision-making.

### **3.4 The concepts of concordance and shared decision-making**

This section briefly examines the concept of concordance to illustrate reasons for the move to shared decision-making as the preferred term to describe and explain the process through which patients and prescribers reach a shared agreement about the use of medicines. The extent to which the change in terminology may reflect the significant emphasis on shared decision-making in health policy is explored. The nature of the concept of shared decision-making is examined together with empirical evidence for its use in practice. It is suggested that, whilst its use is fully justified on ethical grounds, there is, as yet, no consistent evidence that shared decision-making is occurring in practice nor that it will necessarily influence the asymmetry and power that are present in the patient-prescriber encounter.

#### **3.4.1 Concordance and shared decision-making**

As previously discussed (section 3.3.2) the concept of concordance was initially proposed by the Royal Pharmaceutical Society to describe the shared agreement that should be reached between patients and prescribers when a prescription is considered, a decision requiring the active involvement of patients and partnership between the prescriber and patient (RPSGB 1997, Shaw 2004). Nunes et al (2009) later rejected the use of the term concordance since they argued that there was inconsistency in the way it was used and that it referred to a process of shared decision-making about medicines rather than a specific outcome.

Other authors also highlighted difficulties with the concept of concordance. Heath (2003) argued that concordance simply represents another way of getting patients to take their medicines as prescribed although the coercion is better concealed than within compliance. Snowden (2008) similarly argued that patients following doctor's advice remains the principal goal within concordance and that concordance involved a tautological argument since it assumed it was acceptable that some patients did not wish to be involved in decision-making although their decision remained in the 'spirit of concordance' (Snowden 2008: 115). The concept could therefore be applied to any type of person-centred discussion and, consequently, it had little specific meaning making empirical investigation difficult. The concept was also believed to be too broad to allow systematic investigation (Cribb & Barber 2005, Jones 2003).

Studies showed that, in practice, there was limited evidence of the patterns of effective communication necessary to enable concordance (Cox et al 2004, Horne

et al 2005, Stevenson et al 2004). Doctors, in particular, tended to dominate discussions with patients and did not always encourage patients to talk about their medicines. A similar pattern was found with pharmacists and nurses. There was evidence that doctors emphasised the positive benefits of medicines and that patient concerns could be blocked (Cox et al 2004, Stevenson et al 2004). Examples of patient non-adherence were not always explored by doctors, the only professional group able to prescribe at that time, who instead responded by commonly changing the medication or providing education. Patients generally believed that talking about their medicines was helpful although there was evidence that they did not always share medication concerns with the health professional and were not always confident in discussing treatment choices (Horne et al 2005, Stevenson et al 2004).

Bissell et al (2004) also caution that a concordant approach to the consultation may not be sufficient to enable greater adherence amongst patients. In a study of patients of Pakistani origin living with diabetes it was found that a number of material and structural factors constrained patients' ability to follow medical advice regarding their diet and medicines. Factors such as poverty prevented participants from following the advice received although they understood and believed in the medical advice they had received, suggesting that patients' health beliefs may not be as central to their decision-making as the original concordance publication would suggest (Bissell et al 2004, RPSGB 1997).

Health professionals were found to have mixed attitudes towards concordance. Jones (2003) suggested that many health professionals did not know or understand the term whilst Raynor et al (2001) found that around 25% of their sample of newly-qualified doctors, nurses and pharmacists showed negative attitudes towards concordance. More pharmacists had negative views than the other professional groups which, Blenkinsopp (2001) suggests, may arise from their generally positive perceptions of the benefits of medicines. Studies of health professional and patient attitudes towards concordance conducted in Australia and Finland generally showed similar views (Bajramovic et al 2004, Du Pasquier & Aslani 2008, Kansanaho et al 2004).

There were therefore several difficulties identified in relation to the concept of concordance, which informed the decision of Nunes et al (2009) to reject the term in favour of shared decision-making. Shared decision-making is however a concept that raises issues similar to those identified for concordance in terms of a broad

definition and limited evidence that the concept has been adopted in practice (Coulter & Collins 2011, Cribb 2011, Da Silva 2012). There are also a number of particular issues related to medicines and shared decision-making (Cribb 2011). The concept is critically reviewed below together with the evidence for its use and implementation in practice. It suggests that the issues of power and asymmetry in the patient-practitioner relationship outlined above are not necessarily addressed by shared decision-making. The discussion first outlines current health policies involving shared decision-making to illustrate the ‘new policy orthodoxy’ (Cribb 2011: 7) that has contributed to the emphasis placed on achieving shared decision-making in health care practice.

### 3.4.2 Shared decision-making

#### 3.4.2(i) *The policy context*

Greater patient involvement in decisions about health care has been a significant focus within United Kingdom health policies over the last 30 years (Cribb 2011) and is an increasing focus internationally (Coulter & Collins 2011, Cribb 2011, Legaré et al 2008). The NHS Plan (DoH 2000) outlined by the then Labour Government, contained proposals to include patient and public involvement in decision-making at local, regional and national levels. Specific initiatives such as the Expert Patient Programme and the Medicines Partnership (Stevenson & Scambler 2005) sought to enable the greater involvement of patients living with a long-term condition in decisions about care and care services, including the medicines they required. The Medicines Partnership, as previously highlighted, was established to continue the work on the model of concordance developed by the RPSGB (Shaw 2004). As a similar emphasis has continued and possibly even intensified under the current Coalition Government, patient involvement can be described as an established ‘policy orthodoxy’ (Cribb 2011: 7). Shared decision-making was a key principle within the Coalition’s first NHS White Paper and several subsequent consultation or policy documents in which it was stressed that ‘no decision about me, without me’ should be central to the National Health Service (DoH 2012b:1). The Health & Social Care Act (DoH 2012c) enshrined this principle in law. As with previous government policies, patient involvement was facilitated at every level within health care including individual and strategic levels. Shared decision-making is however a policy agenda that is challenging, involving a number of practical and ethical considerations which need to be fully addressed to achieve successful implementation (Cribb 2011). Challenges encountered in implementation of the

policy are outlined below together with some of the specific issues that are involved in shared decision-making in relation to medicines.

### *3.4.2(ii) Shared decision-making: Issues in nature, purpose and practice*

There is no agreed definition of shared decision-making (Da Silva 2012) and it has been variously described as 'a process' (Coulter & Collins 2011: 2) and 'an umbrella category that covers a wide range of possibilities, emphases, models and practices' (Cribb 2011:8). Cribb (2011) identified shared decision-making as one of several policy labels used to describe the component ideas of patient involvement together with other labels such as patient-centredness, partnership and personalisation. Concordantly, he suggests it is 'one version of shared decision making' (Cribb 2011:26). Shared decision-making is therefore a very broad term since Coulter & Collins (2011) also note that it shares many principles with other descriptions of care delivery such as self-management support and personalised care planning.

A number of principles have been identified as necessary to enable a shared decision to be reached, based on patient preferences and the expertise of the health professional although the principles stated can frequently differ between publications. The principles identified from two recent reviews of shared decision-making are identified below in figure 3.2 below. The additional resources identified in figure 3.2 are not always available in all areas of the United Kingdom. The availability and use of decision aids, for example, is not widespread and health coaching, which aims to enable patients to become 'activated' in managing their condition through the development of knowledge, skills and confidence, frequently requires additional training for practitioners and is therefore not available everywhere (Coulter & Collins 2011:7).

Figure 3.2 Key principles involved in shared decision-making

Shared decision-making: Key principles
<ul style="list-style-type: none"> <li>• Partnership between patients and professional to select appropriate treatment, care or support option based on patient preferences and professional expertise</li> </ul>
<ul style="list-style-type: none"> <li>• Provision of evidence-based information about options, outcomes and uncertainties - decision aids may be used where available</li> </ul>
<ul style="list-style-type: none"> <li>• Decision support counselling with a clinician or health coach where available to clarify options and preferences</li> </ul>
<ul style="list-style-type: none"> <li>• Support and feedback to ensure patients and professionals are actively engaged</li> </ul>
<ul style="list-style-type: none"> <li>• A system for recording, communicating and implementing the patient's preferences</li> </ul>

Source: Developed from Coulter & Collins (2011), Da Silva (2012)

The prominence of shared decision-making is also underpinned by both an ethical concern to respect patients' autonomy and right for self-determination and a concern for the effectiveness and equity of services (Coulter & Collins 2011, Cribb 2011, Sieff 2012). Central to the ethical concern in shared decision-making is the belief that patients' values and rights to self-determination should have the same consideration as scientific knowledge of effectiveness (Sieff 2012). Respect for patients requires that their perspectives and values are fully considered (Cribb 2011).

Shared decision-making can be a mechanism through which health care effectiveness can be enhanced since it allows commissioners to ensure that patients receive 'the care they need and no less, the care they want, and no more (Coulter & Collins 2011:vii). It can also ensure that variation in services due to differences in provider-led decisions is minimised (Coulter & Collins 2011, Cribb 2011). Cribb (2011: 9-10) points out that there is also an associated, if contentious, 'economic imperative' for the implementation of shared decision-making since a reduction in costs can result from patients' rejection of treatments where the benefits are unclear and from their improved engagement and greater adherence with advice and treatments, including medicines, that they feel they have 'chosen' (Cribb 2011).

The empirical evidence for shared decision-making is mixed and caution is advised when considering the findings since many of the studies involved small samples or took place in a limited number of settings (Da Silva 2012). There is some evidence that it enhanced people's knowledge about their condition and its treatment and increased patients' confidence in their ability to manage the condition. People's involvement in their care and their satisfaction level was also reported to increase. The use of a variety of decision-support tools was found to help patients feel more engaged in the decision-making process and enhanced their satisfaction with the care provided. It is argued that shared decision-making enhances patients' use of medicines (Murray et al 2006, O'Connor et al 2009). There is limited evidence however about the impact of shared-decision making on clinical outcomes (Da Silva 2012).

Whilst there is generally widespread acceptance of the need for shared decision-making amongst health professionals, shared decision-making is not yet taking place in many areas of practice (Coulter 2010, Coulter & Collins 2011, Fagerlin et al 2010, Joseph-Williams et al 2014a, 2014b). A systematic review of international studies identified several barriers to its implementation (Legaré et al 2008). These included practitioners' beliefs that they already practised in this way and that too much time would be required to involve patients in decision-making, despite a lack of robust evidence that implementation is widespread or that more time is necessary. Patient characteristics were the second most-frequently identified barrier and there was some evidence that practitioners were screening patients to identify those who were likely to engage with, or would benefit from, shared decision-making. The authors suggest that future interventions should be patient-mediated rather than relying on health professionals to identify patients to ensure there is no potential for misjudging patients' preferences for shared decision-making (Legaré et al 2008).

A systematic review of patient-reported barriers and facilitators to shared decision-making (Joseph-Williams et al 2014a) revealed a complexity of issues affecting patients' ability to engage in the process. These included organisational factors such as the time available within the consultation, perceptions of whether the practitioner was busy and whether there was continuity of care. The authors argue that nurses could enhance the patients' perceptions of continuity of care by acting as mediators, explaining the treatment to patients and then outlining the patients' preferences to medical staff. Numerous factors were identified which influenced

patients' involvement in decision-making although only those which are relevant to the current study are considered here.

There was a general assumption that doctors held greater expertise and patients generally undervalued their ability to understand the information and their personal expertise in their condition and personal situation. Patients could feel that practitioners expected them to be passive and feared they would be labelled as a difficult patient and possibly receive poorer care if they asked questions. Many patients did not feel that they were able to take part in decision-making nor that they should be able to do so. Joseph-Williams et al (2014a:307) refer to such perceptions as patients holding an 'unspoken contract with clinicians, adopting the role of 'good patient'' which was demonstrated through their passivity and compliance. The authors suggest that, whilst it was important to ensure patients were fully informed, information alone would not be sufficient to enable patients to be fully engaged in the decision-making process nor would interventions such as health coaching proposed by, for example, Coulter and Collins (2011) since they would not influence the power imbalance evident within the encounter.

Joseph-Williams et al (2014a), adopting a Foucauldian perspective on power, suggested that discursive practices regarding expected patient roles might be changed if patients were enabled to consider their own preferences so that they can avert the professionals' clinical gaze. This would require an implementation strategy that provided patients with explicit permission to revise the covert contact and enhanced their self-confidence so that they were able to do so. There is however very little consideration within the paper of Foucault's work on the operation of power or of the ways in which he suggests discursive change might be achieved through the development of counter- discourses (1980b, 1980c, 1980d, 1991). Joseph-Williams et al (2014b) emphasised the importance of preparing patients for involvement through a pack sent to them prior to their consultation that included information about the importance of shared decision-making and emphasised their different but complementary knowledge to that of the doctor (Joseph-Williams et al 2014b). It was argued that patients would also need to receive information to challenge their perception of a good patient and be reassured that their participation would not influence their care adversely. There was however no further consideration of Foucault's writings in the paper (Joseph-Williams et al 2014b).

In summary the literature about shared decision-making shows that there is evidence that it is not practised routinely, despite the ethical imperative for its implementation (Cribb 2011). There is evidence that patients perceive that they have inferior knowledge and expertise to doctors and that they therefore adopt a passive role within the consultation, supporting the earlier positions discussed in the chapter which argue that the encounter is characterised by power and asymmetry. The concept of shared decision-making therefore shares similar difficulties to that of concordance in terms of its broad definition and difficulties with its implementation in practice. Issues of power and asymmetry in the practitioner-patient encounter have been identified as challenges to the implementation of shared decision-making. There are further challenges to its implementation in the area of medicines' use (Cribb 2011) which are explored in the following section.

### *3.4.2(iii) Shared decision-making and medicines' use: Challenges to implementation*

One particular challenge arising in shared decision-making and medicines' use is that medicines are generally taken over a long period of time and are managed almost entirely by the patient (Cribb 2011). Unlike other treatments explored in shared decision-making studies, the decision is therefore not made at one point in time but at different phases of the patient's illness and in different periods of their life and is therefore more complex. The medicines themselves are often hard to explain since they work through complex and technical mechanisms which, when associated with the frequently wide variation in the knowledge base of the different professionals who might discuss medicines information with patients, means that it is difficult to ensure that patients always receive full and accurate information. In addition, most of the knowledge about the possible benefits and risks of medicines is derived at a population level and can be difficult to apply at an individual level meaning it is again difficult to ensure the patient is fully informed.

Cribb (2011) highlights a general difficulty with shared decision-making in that it is a broad idea that must be implemented in a number of diverse settings involving different patients and professionals and a range of conditions and treatments. Prescribed medicines are a feature of all areas of health care with different challenges regarding shared decision-making in each area. The extent to which a patients' choice of medicines is practical or personally meaningful varies, for example, between different areas. Thus in transplant medicine the patient has little real choice about whether to take medicines and there are few personal factors which influence the choice of drugs. In relation to the use of hormonal replacement

therapies in contrast, patients have a choice in whether they use medicines and that choice is personally meaningful (Cribb 2011). For certain drugs, such as those where there is potential for misuse or those which are prescribed to manage public health risks, there can be legal limits to the professional's ability to enable full patient involvement in decisions.

Cribb (2011) acknowledges the value of NICE guidelines on medicines adherence (Nunes et al 2009) in enabling shared decision-making but argues that implementation of the recommendations needs to be carefully managed to translate guidelines in to practice effectively. This process he suggests requires management at a local rather than a national level. He outlines a number of broad areas of improvement or 'preconditions' to enable successful implementation including effective systems for recording and communicating medicines' information across settings and strategies to ensure that effective review of a patients' medicines can take place on a regular basis. Practitioners also need to be allowed time for this to occur so that communication about medicines can take place more easily. The use of social events such as patient groups and workshops is suggested since this may enable communication in a more natural and equal setting. Finally each local area needs to develop the tools and resources it has available to support patients' decision-making.

The implementation of shared decision-making regarding medicines is therefore demanding, requiring an innovative and strategic approach by practitioners and managers in each local area. Such an approach is likely to be particularly challenging given the limited strategic development of prescribing in many areas (Courtenay et al 2011a, Latter and Blenkinsopp 2011, Lim et al 2012).

In conclusion, the difficulties identified with the concepts of both concordance and shared decision-making in terms of their definition and implementation in practice suggest that they are not necessarily the most appropriate frameworks to examine patients' use of medicines in the context of nurse and pharmacist prescribing. This section has however again identified the role that power and asymmetry can play, even within encounters emphasising shared decision-making. The work of Mykhalovskiy et al (2004), explored in section 3.3.2(iii), has highlighted the potential offered by Foucault's conceptualisations of power and discourse in examining issues in patients' use of medicines. Whilst not examined in depth by the authors, Joseph Williams et al (2014a) also suggested that Foucault's work could be used as a framework to explore ways to address the apparent imbalance of power that

adversely influences shared decision-making. Foucault's writings may therefore have value in exploring the encounter between patients and nurse/pharmacist prescribers and are examined further in the following section.

### 3.5 Foucault and power

This section provides an overview of Foucault's conceptualisation of power to illustrate further the points raised by Mykhalovskiy et al (2004) and Joseph-Williams et al (2014a) that were previously highlighted. It discusses Foucault's approach to discourse and its integral relationship with power and knowledge (Foucault 1980b). It outlines Foucault's view of the nature and operation of power, including the two axes or poles of power he described, anatamo-political and bio-political power. The section first provides an introduction to Foucault's work.

The writings of the French intellectual, Michel Foucault, are generally acknowledged as being extremely influential, particularly in the fields of social sciences and the humanities (Bunton & Petersen 1997, Jones & Porter 1994, O' Farrell 2005). Although Foucault himself resisted all attempts to classify his work, it is generally described as post-structuralist and post-modernist. It is however also highly complex and characterised by a level of abstraction and possibly intellectual elitism (Cheek & Porter 1997, Ramazonoğlu 1993). The distinct phases found within Foucault's oeuvre also contribute to its complexity although several writers emphasise the continuities that are evident in his writings (Cheek & Porter 1997, O'Farrell 2005).

Foucault particularly focused on documents and texts which revealed the discourses used by different theories, institutions and practices and which illustrated the available ways in which knowledge and truth were constructed in a particular historical context (Foucault 1970, Hall 2001, O'Farrell 2005). In Foucauldian terms, discourse was not a purely linguistic concept but was about 'language *and* practice' (Hall 2001:72 *emphasis in original*). Discourses therefore governed the ways in which subjects, including the human subject, were talked about, determined the ways in which ideas were put into practice and also regulated conduct (Hall 2001, O'Farrell 2005). Discourses are 'far from stable entities' (Hamilton & Manias 2009:8) and Foucault's analyses always examined discourses in their local and historical contexts of practice to determine the ways in which they were contested and developed.

Discourse(s), Foucault argued, were essential in the production and exercise of power and power rests within discourses such as those used within medicine (Foucault 1973, Ramazonoğlu 1993). Power was also seen as inextricably linked to knowledge such that knowledge is required for the exercise of power and power is needed for the production of knowledge (Foucault 1990). He however emphasised that they remained separate:

‘I know that as far as the general public is concerned, I am the guy who said that knowledge merged with power...If I had said, or meant, that knowledge was power I would have said so, and having said so, I would have had nothing more to say, since, having made them identical I don’t see why I would have taken the trouble to show the different relations between them’ (Foucault 1988a: 264)

Mykhalovskiy et al (2004) suggest that the language and practices associated with compliance/adherence are one example of discourse. The discourse has a broader social presence than suggested by humanist critiques of the concepts and represented an active social presence in the everyday lives of participants in their study (Mykhalovskiy et al 2004). The discourse underpinned the work that individuals with HIV/AIDS must achieve in relation to managing their condition and, in turn, was ‘constitutive of experience and the self’ rather than denying their experience (Mykhalovskiy et al 2004: 318). As previously discussed however Mykhalovskiy et al (2004) found that there was a creative and complex intermingling of discourses of compliance/adherence with discourses from AIDS organisations, public health, etc. Compliance/adherence was thus embedded within multiple sources of power which together enabled individuals to make sense of their experience and contributed to the development of self-management strategies.

Foucault’s conception of power is thus distinctly different to traditional repressive and sovereign views of power (Hall 2001). Power is, for example, not seen as seeking to control but is instead seen as productive since it engenders knowledge and constructs the subject (Foucault 1988a), as demonstrated within Mykhalovskiy et al’s (2004) study. Power is ‘employed and exercised through a net-like organisation’ (Foucault 1980c:98) rather than a top-down process and works through a capillary mechanism to pervade the social body at all levels. It is therefore a capacity that cannot be owned by anyone, including the state (Elden 2007, Lupton 1997, O’Farrell 2005). Power may however only be exercised over free subjects and is always associated with resistance (Foucault 1980d, 1990). Although the concept was not fully developed by Foucault (Lupton 1997, O’Farrell 2005), resistance may lead to the development of counter-discourses, which in turn

influence the operation of power (Ramazanoğlu 1993). Mykhalovskiy et al (2004) explored the alternative discourses advanced by, for example, AIDS organisations suggesting that they were adopted in different ways and to different extents by individual participants. Whilst the authors do not refer to counter discourses specifically, they suggest that, in the context of HIV, compliance and adherence can no longer be understood as medical ideology alone (Mykhalovskiy et al 2004).

Foucault's view of power, independent of social status or position and integrally related to knowledge, allows the seemingly 'disempowered' professions such as nursing and pharmacy and, indeed, patients to be involved in the operation of power. Foucault's writings have been used to examine the operation of power in both the pharmacist and nursing role (Bissell & Traulsen 2005, Gastaldo & Holmes 1999, Ryan et al 2004) and also to argue for a greater consideration of the political implications associated with the nursing role (Bradbury-Jones et al 2008, Cheek & Porter 1997, Flaming 2006, Gastaldo & Holmes 2003, Hamilton & Manias 2009, Holmes & Gastaldo 2002, McCabe & Holmes 2009, Perron et al 2005, Thompson 2010). Thus far there appear to be no studies of non-medical prescribers using Foucault's writings as a framework.

Foucault described the concept of bio-power to illustrate the many technologies of power that characterised the relationship between the individual and the state (Lupton 1993, McHoul & Grace 1993, O'Farrell 2005, Perron et al 2005). It involves two axes or 'poles' of power including the bio-political axis that represents the techniques through which life, health and death are managed within entire populations and the anatamo-political axis, involving disciplinary power focused on managing the body and behaviours of individuals (O'Farrell 2005).

Mykhalovskiy et al (2004) highlight the significance of public health discourses evident within the field of HIV/AIDS and showed how they could be used to control the behaviour of participants in relation to their use of medicines and other behaviours such as donating blood. The operation of power was therefore in evidence within population-based forms of risk governance.

The concept of disciplinary power represents the anatamo-political axis of power within Foucault's writings and is perhaps the most widely used of Foucault's concepts (O'Farrell 2005, Turner 1997). Technologies or techniques of disciplinary power including surveillance, the disciplinary gaze, measurement and normalisation were used to ensure that individual behaviour was controlled, performance was improved and the individual was made to be maximally useful to society.

Surveillance and disciplinary gaze were derived from the panopticism inherent in the ideal prison design described by Jeremy Bentham in the late eighteenth century, in which prisoners were subject to continued observation by guards from a central tower. The design ensured that prisoners were fully visible to the guards but the prisoners could not know whether they were being observed or not. Prisoners, it was argued, responded to this 'eye of power' by eventually modifying their behaviour as if they were under surveillance at all times (O'Farrell 2005). Surveillance could therefore be a highly effective means of social control:

'Just a gaze. An inspecting gaze, a gaze which each person under its weight will end by interiorising to the point that he is his own overseer, each individual thus exercising this surveillance over and against himself.' (Foucault 1980b: 155)

Such techniques were used to create 'docile bodies' that were able to contribute to the state in economic and social terms (Foucault 1977).

Joseph-Williams et al (2014a), as discussed earlier have suggested that the disciplinary or clinical gaze is implicated in patients' difficulties in engaging with shared decision-making and that they should be given support to enable them to avert the gaze. The authors do not unfortunately develop their analysis and a subsequent paper appears to suggest that an information pack might address patients' perceptions that their knowledge is inferior to that of the professional (Joseph-Williams et al 2014b). As there is no reference to Foucault's conceptualisation of power in the second paper it is not possible to understand or critique the authors' rationale for the effectiveness of an information pack in relation to the operation of power within the encounter. Their response to the issues identified within their earlier systematic review does however appear to be a relatively simplistic interpretation of Foucault's conceptualisation of power.

This section has therefore highlighted the conceptualisation of power offered by Foucault (1980c) which involves distinct differences to the repressive form of power that is the focus of the humanist critique. Foucault's work has been used to explain certain findings obtained in a study of people with HIV and their adherence to medicines (Mykhalovskiy 2004) and may be able to explain patients' difficulties in engaging with shared decision-making. The integral relationship between power and knowledge proposed by Foucault (1977) allows the consideration of the operation of power in disciplines that are traditionally viewed as powerless in capital forms of the concept.

The following section summarises the evidence presented so far regarding patients' use of medicines and considers this in the context of the evidence outlined in the previous chapter about the role of nurse and pharmacist prescribers. The research question and aims/objectives identified from this analysis are outlined.

### **3.6 Summary and identification of research focus**

This chapter has outlined evidence relating to the nature and extent of patients' use of medicines which shows that many patients do not take their medicines as prescribed. The difficulties are particularly found in those patients with long-term conditions. Studies of a range of interventions have shown disappointing results with many interventions being too complex to implement in the practice setting. Contemporary definitions of the issue as one of compliance, adherence or concordance were explored and each concept was examined. Each of the concepts places a particular emphasis on the encounter between patient and prescriber with compliance and adherence suggesting the encounter is a site characterised by power and asymmetry, with neglect of the patient's experience when medicines are reviewed. Explanatory frameworks for the nature of power and asymmetry within the encounter were explored. Concordance, later replaced by shared decision-making, suggests a more equitable and ethical power relationship within the encounter with decisions about medicines made jointly. The difficulties in defining the concepts and the lack of evidence relating to their effectiveness in practice were examined together with research suggesting that power and asymmetry underpinned patients' ability to engage in shared decision-making. Foucault's conceptualisation of power was examined to clarify its differences relative to more traditional capital views of power and to illustrate its relevance to aspects of patients' use of medicines.

Patients' use of medicines is therefore a research field characterised by its complexity and diverse range of explanatory frameworks. The encounter between the patient and prescriber is central to each of the ways in which patients' use of medicines is constructed within the literature. As demonstrated in Chapter 2, knowledge of the ways in which patients and nurse or pharmacist prescribers construct and manage the patients' use of medicines within the encounter is limited. The research question and aims outlined in figure 1.1, repeated below, were developed to allow sensitivity to the range of issues that might emerge in the prescribing encounter.

Figure 1.1 Research question and research aims/objectives

<b>Research question</b>
<b>How do patients and nurse/pharmacist prescribers manage the prescribing encounter in relation to the use of medicines for a long-term condition?</b>
<b>Research aims</b>
<ol style="list-style-type: none"> <li>1. To undertake an in-depth qualitative analysis of the understandings of medicines use held by patients and nurse/pharmacist prescribers.</li> <li>2. To examine the nature of the discussion about a patient's use of medicines that occurs within a prescribing consultation</li> </ol>
<b>Research objectives</b>
<ol style="list-style-type: none"> <li>i. To examine the nature of the discussion about the patient's use of medicines that occurs in a consultation with a nurse/pharmacist prescriber</li> <li>ii. To examine the patient's views about the discussion about using medicines that occurs in a consultation with a nurse/pharmacist prescriber</li> <li>iii. To examine patient and nurse/pharmacist prescribers' views of the factors influencing patients' use of medicines</li> <li>iv. To understand patient and nurse/pharmacist prescribers' views of the ways in which patients' medicines use can be enhanced</li> <li>v. To explore the supports and constraints experienced by patients and prescribers regarding patients' use of medicines</li> </ol>

The methodological framework believed to be appropriate to investigate the research question and aims/objectives is justified in the following chapter together with the methods used to collect relevant data.

## CHAPTER 4: RESEARCH METHODOLOGY AND METHODS

The purpose of this chapter is to justify the methodological approach underpinning the study and to discuss the methods through which data were collected. It first presents a rationale for the use of a generic approach to discourse analysis in which the four core features of the approach are employed but which does not show a commitment to a specific theoretical view. The approach enables the researcher to make sense of one particular topic or domain of experience (Antaki 2008). The selection of this approach from among the ‘multitude of rather different approaches’ classed as discourse analysis is justified (Hammersley, 2002: 2).

The decision regarding the chosen approach was however challenging due to the number of approaches within discourse analysis, the range of underpinning theoretical assumptions and the extent to which each approach addressed the study’s research question and aims/objectives. Study and reflection enabled a greater understanding of the role and function of theory in social research, a journey similar to that outlined by Dillow (2009) in her account of the struggle she encountered as a doctoral student. My personal journey, in which the need to work with ‘pluralities and diversities rather than universals’ in qualitative methodology was acknowledged and understood (Wuest 2011: 878), is outlined in section 4.3.

A generic approach to discourse analysis however requires considerable attention to scholarship and clear delineation of the strategies used to ensure rigour and those adopted within the study are therefore outlined. The chapter then presents the methods through which data were collected, including observation of the prescribing encounters and interviews with patients and nurse prescribers. It concludes with discussion of the characteristics of the sample of participants recruited to the study.

### 4.1. Discourse analysis: Negotiating the ‘contested terrain’

Previous chapters have shown the significance of the encounter between the prescriber and patient in enabling the patient’s use of medicines. Issues of power have been shown to be important factors and there are several ways in which patients’ use of medicines are constructed. There has however been minimal empirical exploration of such issues within the non-medical prescribing encounter and the current study is therefore focused on how patients and nurse/pharmacist

prescribers manage the encounter in relation to the patient's use of medicines. As there is a relatively limited literature in this area the study is exploratory and seeks to examine the patient–prescriber encounter in relation to the ways in which medicines' use is managed and the views of both prescribers and patients living with a long-term condition. The complexity of issues involved in patients' use of medicines and the narrow focus on patient behaviour found within the positivist research in this area, outlined in chapter 3, emphasised, at an early stage, the importance of a qualitative research strategy. Qualitative, interpretive approaches enable the collection of rich data and an in-depth analysis (Malson 2010) and involve a number of 'practices that make the world visible' (Denzin & Lincoln 2011: 3). The current study is also focused on aspects of the patients' illness experience and the practices of health professionals which Morse (2011) has identified as two of the key areas in which qualitative health research is undertaken.

Chapter 3 has outlined the many different ways in which patients' use of medicines is constructed and a qualitative research approach sensitive to patient and prescriber constructions of this issue was sought. Discourse analysis (DA) became the preferred methodological approach since it is concerned with language and the ways in which personal, social and political goals are achieved through language (Cutcliffe & Harder 2012, Gee 2005). It enables examination of the discourse positions adopted by patients and prescribers in relation to medicines' use and how these positions are constituted. Discourse analysis is usually classed as qualitative research since it has a shared concern in the meaningfulness of social life although it is concerned with how ideas, objects and the social world in general are 'created and maintained through the relationships among discourse, text, and action' rather than understanding and interpretation (Phillips et al 2004: 637). It encompasses a number of methodological approaches derived from a variety of theoretical and epistemological traditions including, amongst others, linguistics, sociology, psychology and anthropology (Antaki 2008, Hammersley 2002, Potter 2004, te Molder 2009, Wiggins 2009). The range of approaches within DA means that it can be described as a 'contested terrain' (te Molder 2009:312) and should be more properly viewed as a research field (Taylor 2001). The term discourse can also be described as a 'congested concept' with numerous definitions of the term arising from its different theoretical legacies (Buus 2005:27).

Key DA approaches used in social sciences research include conversation analysis, discursive psychology, Foucauldian research and critical discourse analysis (Wiggins 2009, te Molder 2009, Hammersley 2002) although other authors classify

several additional approaches as DA, including interactional sociolinguistics and interpretative phenomenological analysis (e.g. Antaki 2008, Wetherell 2001). There are however a number of underlying assumptions common to all of the approaches including the view that discourse, whether written or spoken, is central to everyday life and human relationships and that it has a focus on social action i.e. how social practices are achieved in and through discourse (Wiggins 2009, Antaki 2008, Potter 2004). In addition, most forms of DA adopt a social constructionist approach in that language does not have universal meaning but is an active and constructed tool that co-constitutes the world around us (e.g. Wiggins 2009, te Molder 2009, Antaki 2008, Potter 2004, Cheek 2004, Hammersley 2002). Texts, whether written or spoken, therefore not only reflect a certain view of reality but are active in the construction and maintenance of that view of reality itself (Cheek 2004). Each approach however also involves specific philosophical and theoretical assumptions about, for example, the nature of reality and the importance of context together with a distinctive understanding of the term discourse (Wetherell 2001), depending on the origins of the approach, the subject area and the theoretical orientation of the researcher (Sawyer 2002).

Key differences in some of the common DA approaches, selected for their perceived relevance to the study, are summarised in Table 4.1 overleaf. The table highlights the positions taken by each approach on a number of philosophical and methodological issues. It should be emphasised however that the table presents a relatively simplistic overview of DA approaches as there are a number of variants within each approach, meaning that neither the columns nor rows should be viewed as discrete (Antaki 2008). On a personal level, it proved helpful however in clarifying the relevance of each approach in the context of the study. The rationale for the eventual use of 'generic' DA is presented below in section 4.2.

Table 4.1 Selected characteristics of different approaches within discourse analysis

Approach to discourse analysis	Paradigm & assumptions re nature of reality	Focus of analysis	Political engagement	Importance of context	Nature of actions to be revealed (from Antaki 2008:432)
Conversation analysis	Interpretivist, realist	Social action as achieved through sequential analysis of talk, mostly in naturally-occurring but also 'institutional' interaction	Generally value-neutral, power may be manifest in talk	Only that which is evident within interaction - context is constituted within talk itself	Accomplishing interactional life in real time
Discursive psychology	Constructivist Anti-realist Anti-cognitivist – emotions, cognitions and attitudes exist in interaction, not as inner states	Interpretative repertoires that explain how psychological concepts such as attitudes are constructed & understood in social interactions	General view that only that which is manifest in talk is important, although this is a source of dispute	Generally avoids 'trading on ethnographic particulars' (Potter 2004:16)	Displaying and deploying psychological states; describing the world and promoting interests
Critical discourse analysis (CDA or FDA)	Realist, particularly in linguistic approaches  Can be post-structuralist particularly in Foucauldian approach	Role of discourse in construction and maintenance of power. Can have a linguistic orientation, although this is less marked in post-structuralist approaches	Overtly political and seeks to expose & challenge ideologies and hegemonic discourses. Generally Marxist conception of power except in Foucauldian approach	Essential in understanding the macro-societal context	Constituting and regulating the social and political world: the operation of power

Sources: Antaki (2008), Hammersley (2002), Hepburn & Potter (2004), Potter (2004), Wodak (2004), Wooffitt (2005)

## 4.2 Using a generic approach to discourse analysis

Table 4.1 illustrates, in summary, the positions taken by each approach on a number of philosophical and methodological issues including assumptions about the nature of reality, its consideration of context and power and the nature of the actions that are to be revealed through the analysis.

The previous chapter has demonstrated the importance of power relations within the encounter and its central position within critical discourse analysis (CDA) meant that this approach became the first choice of methodology. CDA however involves a 'broad family of analysts' including many with a linguistic orientation derived from critical linguistics and those involving a post-structuralist background, such as those based on Foucault's work or the Lacanian psychoanalytic tradition (Antaki, 2008:434, Smith 2007).

Variants of CDA with a linguistic orientation are however mostly informed by Marxism and are politically engaged. Power is therefore seen as repressive and exercised by those in elite positions, with issues of ideology and hegemony being central to CDA studies (Antaki, 2008, Wetherell, 2001). Data sources therefore mostly involve official documents and press reports (ten Have 2006). As previously discussed, a Marxist conception of power is however not congruent with the general view that nursing and pharmacy are not high status occupations (Candlin 2000, Fletcher 2006, Harvey & Koteyko 2013, Lupton 2003, Pilnick 2004). It was recognised that Foucault's conception of localised and diffused power, interconnected with knowledge and embedded in the daily practices of health professionals (Turner 1997), may offer considerable potential as an explanatory framework for the issues which are the focus of this study. The author was however 'famously uninterested in the details of social interaction' (Wetherell 2001:383) and it is widely documented that Foucault was reluctant to define a specific research method (Graham 2005, Nicholls 2009, Powell 2002), instead studying the socio-historical development of discourses through genealogy and archaeology (Diaz-Bone et al 2007). Whilst there has been a significant increase in the number of empirical studies based on Foucauldian considerations over the last two decades (te Molder 2009), analysis usually takes place at a meso- or macro-level rather than the micro-level of individual interactions (Diaz-Bone et al 2007). This approach to analysis appeared to limit the relevance of Foucauldian analysis to the current study.

No single approach to discourse analysis therefore appeared to offer all of the characteristics necessary to address the current study's research question and aims. The nature and purpose of a generic approach to discourse analysis is presented in 4.2.1 below and the reflective considerations of the use and purpose of theoretical frameworks within qualitative research which enabled the eventual decision to use this approach are discussed in section 4.3.

#### 4.2.1 Generic discourse analysis: its nature and purpose

A generic or 'unadorned' approach to discourse analysis is one in which the four core features of any discourse analysis are employed (see Table 4.2 below) but which does not show a particular commitment to an ontological and epistemological school (Antaki 2008:432). The approach enables the researcher to make sense of one particular topic or domain of experience through the close inspection of texts such as news reports, official documents or transcripts of interviews with participants and can be used to examine the underlying dimensions by which participants make sense of their experience or to 'uncover the imprint that society has left on their lives' (Antaki 2008:433). This latter purpose was of particular relevance to the current study.

Table 4.2 The core features of discourse analysis

<b>Talk or text is to be naturally found, with some analysts allowing interview data in this natural category, others not</b>
<b>Words are to be understood in their co-text at least and their more distant context if this can be justified</b>
<b>The analyst must be sensitive to the words' non-literal meaning or force</b>
<b>The analyst must reveal the social actions and consequences achieved by the words' use – for those responsible for the words' use and their addressees, or the world at large</b>

Source: Antaki, C. (2008:432)

Antaki (2008) points out that many discourse analysts choose deliberately to work outside specific methodological positions and this stance was believed to be relevant within the current study which was exploratory in nature. An approach which enabled sensitivity to emerging findings was felt to be preferable to the imposition of a specific worldview. The need for close attention to strategies ensuring rigour in both the conduct of a generic DA study and analysis of its findings is however emphasised (Antaki et al 2003, Antaki 2008) and will be examined in the context of the current study in section 4.4 below. The theoretical

and personal considerations involved in the choice of a generic approach to DA are first examined.

#### **4.3 The use of theory in social research: a personal account**

As I considered the various approaches within DA, my research journal shows a growing frustration that no single approach appeared to offer all of the characteristics I believed were necessary to enable adequate understanding of the research area.

A generic approach appeared to offer a practical way forward. I was however aware that the use of a robust theoretical framework would serve to structure my research and would allow a clear statement of my approach towards issues of ontology, epistemology and methodology (Mack 2010). Anfara & Mertz (2015) argue that a theoretical framework has a significant influence on almost every aspect of qualitative research including the nature of the research focus and the study's conduct. They acknowledge however that a variety of opinions exist within the qualitative research about the significance and purpose of theory in research. Use of a theoretical framework appeared particularly important as a novice researcher, enabling coherence and rigour within the study. Delamont (2002) for example suggests that the use of theory separates social science accounts from those accounts found in journalism or stories. Paul and Marfo (2001) also caution that a failure to examine the theoretical perspectives underpinning a research study inevitably leads to a simplistic, technique-based approach.

I also wished to avoid the frequent criticism that theoretical issues are often ignored in the increasing numbers of health and nursing research studies using DA (Buus 2005, Cheek 2004, Smith 2007). Cheek (2004), for example, emphasises that researchers need to define the theoretical underpinnings of their use of discourse and discourse analysis, justify their choice of texts and should provide a rationale for the framework underpinning analysis. A relevant theory to underpin the study appeared however to be elusive and a considerable period of time was spent in seeking one theoretical framework that was consistent with all aspects of the study.

Dillow's (2009) paper, in which she describes her journey towards theoretical understanding proved a turning point. Whilst her study was entirely different to mine, as was the nature of her struggle with theory, I was able to recognise the

feelings of uncertainty that she described and to appreciate that the use of theory may often involve a 'journey away from certainties' (Dillow 2009: 1349).

Following further study of the nature of the many paradigms/theories available in social sciences research and their appropriate use (e.g. Coulehan 2009, Holloway & Riley 2011, Lather 2006), I was able to fully understand that it was not necessary to find 'one best way' in which the research could be grounded (Lather 2006: 36). This search was perhaps influenced by my previous research experience gained largely from positivist studies. An arguably misplaced confidence in the value of the positivist paradigm means that concerns about appropriate paradigms are not a particular issue for positivist researchers whilst 'tensions, controversies and conflicts' are widespread within social sciences research (Holloway & Riley, 2011: 973).

Lather (2006: 52) suggests that a proliferation of frameworks is necessary in a post-modern era since it enables researchers to grapple with 'a less comfortable social science full of stuck places and difficult philosophical issues'. It challenges researchers to work within an epistemological diversity rather than the consensus and sequential paradigm models traditionally advocated by authors such as Denzin and Lincoln (2005). Research students, she suggests, need to develop an enhanced understanding of the underpinning philosophical, political and ethical considerations in research rather than the ability to apply simple technical procedures. I came to recognise that I had perhaps been seeking a set of defined procedures to conduct the study rather than being open to the evolution and development that is characteristic of qualitative methodology (Cutcliffe & Harder 2012).

My difficulties in making a decision regarding the appropriate methodological framework can also perhaps be characterised as a situation of being 'terrorized by the literature' (Becker 2007:135). In common with many postgraduate students in his experience, I was paying too much attention to the research literature and trying to demonstrate a full understanding of all theoretical approaches in order to select the one which was appropriate. He cautions that there are many difficulties arising from this approach and novice researchers should instead pursue the normal scientific goals of producing a good piece of work, with a clear rationale, that can be used by others and which enhances understanding (Becker 2007).

Whilst this view of the appropriate conduct of a study was reassuring, concern remained about the extent to which a theoretical framework was essential to the

conduct of a systematic analysis of data. Different analytic frameworks were considered but provide a very specific way of examining data which appeared inappropriate for an exploratory study. A theoretical framework can mean that the researcher becomes 'blind' to aspects of the data that are not part of the theory (Mertz & Antaki, 2015:232). Wolcott (2002) however provided a further turning point when he stressed that theory should only be introduced when researchers are clear about what they need to focus on theoretically and how it specifically relates to what they have to report. The following statement struck a particular resonance and enabled the confident use of a generic approach to discourse analysis:

'In other words, when you can *make theory work* for you, use it. When theory is only *making work* for you, look for alternative ways to pull your account together and to explain what you have been up to' (Wolcott 2002:96 *emphases in original*).

Consideration of Wolcott's (2002) assertion reassured me that a generic approach to discourse analysis was appropriate. The approach was consistent with Becker's (2007) advice in that it offered a methodology that enabled a comprehensive and appropriate examination of issues relevant to the research question and allowed an explanation of the study's conduct. It was therefore adopted within the current study. The strategies used to promote rigour within the study are outlined below.

#### **4.4 Ensuring the quality of a discourse analytic study**

The determination of quality within qualitative research is often a subject of 'intense and passionate discussion' (Nixon and Power 2007:71). Some authors adopt a replication perspective in which the concepts of validity, reliability and generalizability as used in quantitative research are adapted for use in qualitative research (Sparkes 2001). In the parallel perspective it is instead argued that the paradigmatic differences between qualitative and quantitative approaches require the use of different criteria to evaluate quality, such as trustworthiness and credibility (e.g. Tobin & Begley 2004).

Whilst both quality perspectives are seen within the DA literature, there is general agreement regarding the ways in which researchers can demonstrate that they have practised 'good science' and ensure that the research process is made visible and scholarship is evident (Nixon & Power 2007:75). The framework for rigour proposed by Nixon and Power (2007) was adapted for use within the study. It is based on the work of several DA researchers to identify relevant quality issues. The

adapted framework is outlined in table 4.3 below together with the ways in which each of the criteria are addressed. Whilst not included within Nixon and Power's framework (2007), a reflexive approach was also adopted within the study. Reflexivity is a commonly adopted strategy within qualitative research to examine and acknowledge the researcher's personal contributions to the production of knowledge (Kvale & Brinkmann 2009). Different forms of discourse analysis however have a particular stance in relation to reflexivity and the approach adopted in the study is justified in section 4.4.1(vii).

#### 4.4.1 Framework for rigour within the study

Table 4.3: Strategies to facilitate rigour within the study

<b>Elements that facilitate rigour within Discourse Analysis</b>	
i.	<b>Clear research question: is it appropriate for DA?</b>
ii.	<b>Clear definition of discourse and species of DA</b>
iii.	<b>Effective use of theoretical framework – clarity and explicitness in epistemological and ontological positioning</b>
iv.	<b>Transparency in analysis methods and application of theory to the analysis</b>
v.	<b>Clarity in selection of talk/texts</b>
vi.	<b>Concepts/criteria/strategies to guide analysis</b>
vii.	<b>Reflexivity</b>

Source: Adapted from Nixon and Power 2007 (Adaptations placed in italic font)

##### i. *Clear research question: is it appropriate for DA?*

As shown in Section 4.0 the study's research question is focused on how the prescribing encounter is managed by both the patient and prescriber in relation to the patient's use of medicines. A focus on how something is achieved is commonly found in DA studies (Hepburn and Potter 2004). A question of this nature together with the research aims means that the study has a focus on both the social practices within the prescribing encounter and the resources which are drawn on in those practices, foci which are entirely appropriate within a discourse analytic study (Potter 2004).

*ii. Clear definition of discourse and species of DA*

The use of a generic approach to DA within the study has been justified. The definition of discourse offered by Lupton (1992) was used within the study as it is concise and reflects the importance of discourse within verbal communication and within the broader context, both of which are central to this study:

'A group of ideas or patterned way of thinking which can both be identified in textual and verbal communications and located in wider social structures' Lupton (1992:145)

*iii. Effective use of theoretical framework – clarity and explicitness in epistemological and ontological positioning*

The position adopted regarding the use of a specific theoretical framework has been justified in Sections 4.2 and 4.3. The use of a generic approach does not mean that theory is absent from the study as it is located within the field of discourse analysis and therefore shares the same general assumptions that written and spoken discourse is central to everyday life and that social practices are achieved in and through discourse (Wiggins 2009, Antaki 2008, Potter 2004). A theoretical framework relevant to the emerging findings will be adopted to interpret their significance. The framework is examined in Chapter 7.

*iv. Transparency in analysis methods and application of theory to the analysis*

Discourse analytic studies require a detailed, systematic and theoretically based analysis (Antaki et al 2003, Cheek 2004, Hepburn & Potter 2004). The processes through which an analysis of this nature was achieved are discussed in section 4.10 and the theoretical framework is discussed in chapter 7.

*v. Clarity in selection of talk/texts*

Discourse analysis involves the analysis of 'texts and talk in social practices' and textual forms commonly include one or more of transcripts of talk, transcripts of open-ended interviews or documentary sources (Potter 2004:203). This study involved two forms of talk/text, including data obtained from encounters between routine out-patient appointments involving patients and nurse prescribers, which are classed as 'naturally occurring' data since they are independent of the researcher's actions (Silverman 2001:159).

Semi-structured interviews also took place with both patients and prescribers and therefore transcripts of the interviews were a second textual form. The debate about

the value of interviews within discourse analysis is outlined in section 4.5 to justify their use within the study.

*vi. Concepts/criteria/strategies to guide analysis*

The analytic process is discussed further in section 4.10. The measures outlined by Antaki et al (2003) were followed to ensure rigorous data analysis through an avoidance of the six common analytic shortcomings they identify within DA. They include, for example, under-analysis through summary and through over-quotation or use of isolated quotes and through the circular identification of discourses and mental constructs. The emerging analysis was subject to regular critical review within supervision sessions.

*vii. Reflexivity*

Whilst not included in Nixon & Power's (2007) framework, reflexivity is often seen as essential within post-structuralist approaches to DA since values are integral to both discourse and knowledge (Lupton 1992). A reflexive approach on the part of researchers is therefore required to illustrate their potential influence on the use of discourse. Reflexivity is also of central importance within an analysis focused on social structures and power relations within everyday practices, particularly as the individual is generally unaware of these processes (Lupton 1992).

It is however a concept with many definitions and uses. Lynch (2000:27), for example, has identified at least six different 'reflexivities', each with a number of variants and argues that the outcomes of reflexivity cannot be known until the concept and its relevant applications are further defined. A pragmatic and cautious approach was therefore adopted in the current study such that reflexivity was focused only on seeking to identify any personal values or experience which might influence interpretation of the data. This practical stance is adopted by many discourse researchers who acknowledge the constructed nature of their findings but feel that it is not necessary to examine their particular constructions further. They thus avoid the 'potentially infinite interpretative regress' which can arise from further analysis of each analysis to identify the multiple layers of construction in full (Wetherell 2001: 397).

Reflexivity was achieved through monthly research supervision sessions in which the emerging analysis was seen and debated with both supervisors. A fieldwork diary was used regularly throughout the data collection and analysis phases to

engage critically with personal influence on the interpretation of data and its emerging analysis.

Data collection methods are outlined below.

#### **4.5 Data collection methods**

The importance of actual observation of the prescribing encounter has been outlined at the end of Chapter 3 because of the disparity found between nurse prescribers' accounts of their prescribing practice and that observed in practice (Latter et al 2007a, Sibley et al 2011). Gobo (2011) similarly highlights the value of observational research in that actual behaviours tend to be more stable over time than any views expressed. Non-participant observation of patient-prescriber encounters was therefore undertaken and its conduct is outlined in section 4.7.

Interviews were the second form of data collected within the current study. A method that is frequently used in social research (Bryman 2012, Gubrium & Holstein 2011), qualitative interviews enable access to participants' knowledge and experience and the meanings they give to their social worlds (Kelly 2010, Miller & Glassner 2011). Debates however exist within the literature about the extent to which interviews reflect reality or whether the interview simply represents a narrative construction of the social world created by the interviewer and interviewee within their interaction (Miller & Glassner 2011). As outlined in section 4.1, each approach to discourse analysis however takes a particular position in relation to the nature of reality, or ontology, with poststructuralist approaches frequently adopting the anti-realist stance suggested in the latter statement where the social world is created within the social interaction.

Wetherell (2001) however argues that there are a number of ontological positions adopted even within a particular DA tradition and Hall (2001:73) suggests that whilst Foucault argues that meaning is created within discourse, he 'does *not* deny that things can have a real material existence in the world' (*emphasis in original*). A relativist ontological position is therefore possible within studies conducted within a social constructivist approach. A relativist position was adopted within the current study since it was accepted that people are able to create meaningful worlds but without accepting that there is one single reality that can be apprehended through an interview (Miller & Glassner 2011). This position seemed essential since, for the

patients involved in the current study, their life with a long-term condition was entirely real to them and, as Charmaz (1995) noted, they experience illness even without taking part in research interviews.

The diversity of approaches in the field of DA has been outlined in section 4.1. Whilst each approach takes a particular position in relation to matters of ontology and epistemology, one issue in which they appear to have a shared view is the dislike of the interview, even though interviews are sometimes used in studies involving various forms of DA (Cruickshank 2012, O'Rourke & Pitt 2007). Concern about the use of interviews in DA centres on the extent to which the interview setting influences the discourse being studied, since interviewees' answers will be shaped by the discursive situation created within the interaction with the interviewer (Cruickshank 2012). This issue is not simply one of undue researcher influence but is of greater significance since discourse may be substantially changed by the new discursive situation arising within the interview.

O'Rourke & Pitt (2007) also highlight the concern held by DA researchers that interviews will not reflect real-world discourse, hence their general preference for 'naturally occurring' discourse. Drawing on Foucault's (1988) 'technology of the confessional' they point out that the 'interview society' (Kvale & Brinkmann 2009, Silverman 1993) is however now so pervasive that even 'natural' interactions are contaminated by media constructions, other public portrayals or by research. Despite such concerns, both groups of authors argue that the greater use of interviews in DA is appropriate and can provide opportunities to gain additional insight and may actually lead to the identification of discourse that is difficult to identify in natural situations (Cruickshank 2012, O'Rourke & Pitt 2007). Interviews were therefore judged to be an appropriate way of obtaining textual data in the current study. The conduct of semi-structured interviews with patients and prescribers is outlined in section 4.8.

#### **4.6 The sampling process**

A purposive approach to sampling was adopted in which participants were recruited on the basis of characteristics which were relevant to the research question (Mason 2006). A fixed purposive sampling strategy was used to ensure the study's conduct remained within the parameters of Research Ethics Committee approval (Teddle & Yu 2007).

Detailed inclusion and exclusion criteria were developed to ensure the recruitment of participants with relevant characteristics (see table 4.4 below). The criteria were established on the basis of research evidence relating to patients' use of medicines (see Chapter 3) and knowledge of the field of non-medical prescribing (see Chapter 2). The study therefore involved patients taking medicines on a regular basis for a long-term condition together with nurses and pharmacists practising as independent prescribers.

Any exclusion criteria were restricted to factors which had particular implications for the nature of any findings. Patients who had a mental health condition or who were under the age of 18 years were therefore excluded due to the specific issues involved in their use of medicines (Nunes et al 2009). Patients requiring an interpreter were also excluded due to the lack of available resources.

A sample size of 10 nurse/pharmacist prescribers and three patients per prescriber was initially sought i.e. a total of 30 patients and 10 nurse/pharmacist prescribers. As discussed in section 4.6.1 below, recruitment was lower than anticipated and, in particular, there was no recruitment of pharmacist prescribers.

**Table 4.4: Sample selection: Inclusion and exclusion criteria**

<b>Sample group</b>	<b>Inclusion criteria</b>	<b>Exclusion criteria</b>
<b>Patients</b>	<p>Any patient who:</p> <p>Is an adult aged over 18 years</p> <p>Has a condition for which they need to take one or more medications on a long-term basis</p> <p>Is judged, by the nurse or pharmacist prescriber, as being capable to give consent to participate</p>	<p>Patients who require an interpreter to participate in the study due to the significant resources necessary to provide the appropriate formal interpretation services and the confidentiality issues involved should a family member act as interpreter</p> <p>Patients who take medication on a regular basis for a mental health condition only. It is recognised that there are many distinct issues involved in enabling the use of medication in people with a long-term mental health condition (Nunes et al 2009).</p> <p>Patients who are under the age of 18 years as there are specific issues involved in supporting the use of medicines in children with a long-term condition (Nunes et al 2009)</p>
<b>Nurse and pharmacist prescribers</b>	<p>A registered nurse or pharmacist who has an additional qualification as an independent/supplementary prescriber and is thus able to prescribe for patients within the limits of their competence (DoH 2006)</p> <p>Has responsibility for the care and management of people with a long-term condition, including the prescription of any required medication</p> <p>Works within a hospital or primary care setting</p>	<p>Nurses and pharmacists who are not qualified prescribers</p> <p>Nurses and pharmacists who supply and administer medicines to patients via a patient group direction</p>

#### 4.6.1 Recruitment of sample

A summary of the sample recruitment process is outlined in a flowchart at the end of the section (figure 4.1). Each stage of the recruitment process is explored in detail below.

#### 4.6.1(i) *Negotiating access to research sites*

Permission to conduct the study was sought initially from the non-medical prescribing director of one English strategic health authority who then contacted the prescribing leads within each National Health Service Trust within the authority to request participation in the study. The email request included a summary of the study. Prescribing leads from four secondary care Trusts and one primary care Trust responded to this request. Further discussion of the study took place with each Lead and their role in the research process was clarified. Permission from the prescribing lead was also obtained to identify him/her as the principal investigator in the application for Research and Development (R&D) approval (DoH 2005b). Further contact with the non-medical prescribing leads occurred as necessary via email and/or telephone to respond to any queries and to provide information about progress in obtaining ethical clearance and R& D approval. (See appendix 1 for details of communication with Trust leads)

#### 4.6.1(ii) *Recruitment of sample: prescribers*

Following R & D approval, prescribing leads were asked to circulate letters of invitation and participant information sheets to all of the nurse and pharmacist prescribers within their Trust. It was recognised that the prescribing leads, in their role as gatekeeper, might create the expectation that the prescribers must participate and, to avoid any coercion, both the letters and the participant information sheets therefore stressed the voluntary nature of participation (Walls et al 2010). (See appendix 2 for details of communication with prescribers)

Whilst the research study sought to recruit both nurse and pharmacist prescribers, no pharmacists volunteered to participate. As noted in Chapter 2 there were relatively few pharmacist independent prescribers at the time of data collection which may have contributed to this situation. Three of the non-medical prescribing leads also pointed out that, whilst their hospital Trust employed pharmacist prescribers, none of the pharmacists assumed responsibility for the independent management of patients with a long-term condition as required by the research protocol. Their prescribing role was instead undertaken in ward settings, where they worked closely with medical staff to review and, where necessary, change in-patient medication.

The prescribing leads were asked if there were any meetings of non-medical prescribers held within the Trust when the research could be presented to enhance

recruitment. Unfortunately, such meetings had either just taken place and would not be held again for several months or were no longer held within the Trust.

Prescribing leads in all Trusts were asked to re-circulate the email and study information six weeks later as no responses had been received from prescribers. Email responses were then received from nurse prescribers working in three of the hospital Trusts and the primary care Trust. There were no responses from one hospital Trust and no responses at all from pharmacist prescribers, reflecting similar difficulties in pharmacist recruitment noted in other studies (Weiss et al 2013, Weiss et al 2014).

Nurse prescribers expressing an interest in participation were contacted and a meeting was arranged with each nurse to answer any queries and obtain signed, informed consent. In total, seven nurse prescribers agreed to participate.

The non-medical prescribing lead in the remaining hospital Trust agreed to circulate the email and supporting information one further time, six weeks after the initial reminder. It was agreed however that this would be the final email sent to the prescribers to avoid any perceptions of harassment regarding their participation. No responses were received and therefore this Trust did not participate in the study.

The size of the prescriber sample was therefore smaller than anticipated which, in turn, meant that fewer patient participants could be recruited. The appropriate size of a sample is however a focus for significant debate in qualitative research (e.g. Baker & Edwards 2012, Gobo 2004, Morse 2000). In a review of the number of qualitative interviews required, the conclusion reached was that 'it depends' (Baker & Edwards 2012:6) on a number of factors including, amongst others, the availability of resources, methodological and epistemological perspectives and the breadth of the study. Whilst there is an emphasis on data saturation, when no new findings are emerging, there are practical challenges in achieving it, particularly when ethical approval is based on a stated sample size (Baker & Edwards 2012). Although the sample size in the current study was smaller than planned it allowed the emergence of a rich dataset and consistent themes and enabled an in-depth analysis of the data, factors which are important in justifying sample size in qualitative studies (Kelly 2010). It is therefore difficult to state definitively that the sample is too small although its size should be taken into account when considering the relevance of the findings.

There was however significant variation within the group of nurse prescribers in terms of their site of practice and clinical speciality. It is acknowledged however that the patients and prescribers recruited were mostly of white British origin which under-represents the ethnic variation found within both the national population (Office of National Statistics 2011) and the nursing population (Wood & Cracknell 2013).

The purposive sampling strategy used within the study does not however seek a representative sample rather one which could make a meaningful contribution to the study's findings. Patients in the study were living with a wide range of long-term conditions and all were required to use at least one medicine on a regular basis. The sample of nurse prescribers demonstrated similar characteristics to those in other studies in terms of their seniority and length of experience (e.g. Latter et al 2007, Courtenay et al 2009a, 2009b). All of the participants were therefore able to make a rich contribution to the study.

#### **4.6.1 (iii)      *Recruitment of sample: patients***

Nurse prescribers who gave consent to taking part in the study were asked to provide a letter of invitation and participant information to patients in their care who took medication for a long-term condition on a regular basis. They were asked to approach only those patients who, in their opinion, were well enough to participate in the study and had the capacity to give informed consent. Patient information sheets and letters of invitation were circulated to patients by the nurse prescribers. A total of 21 patients informed the nurse prescribers that they would take part in the study.

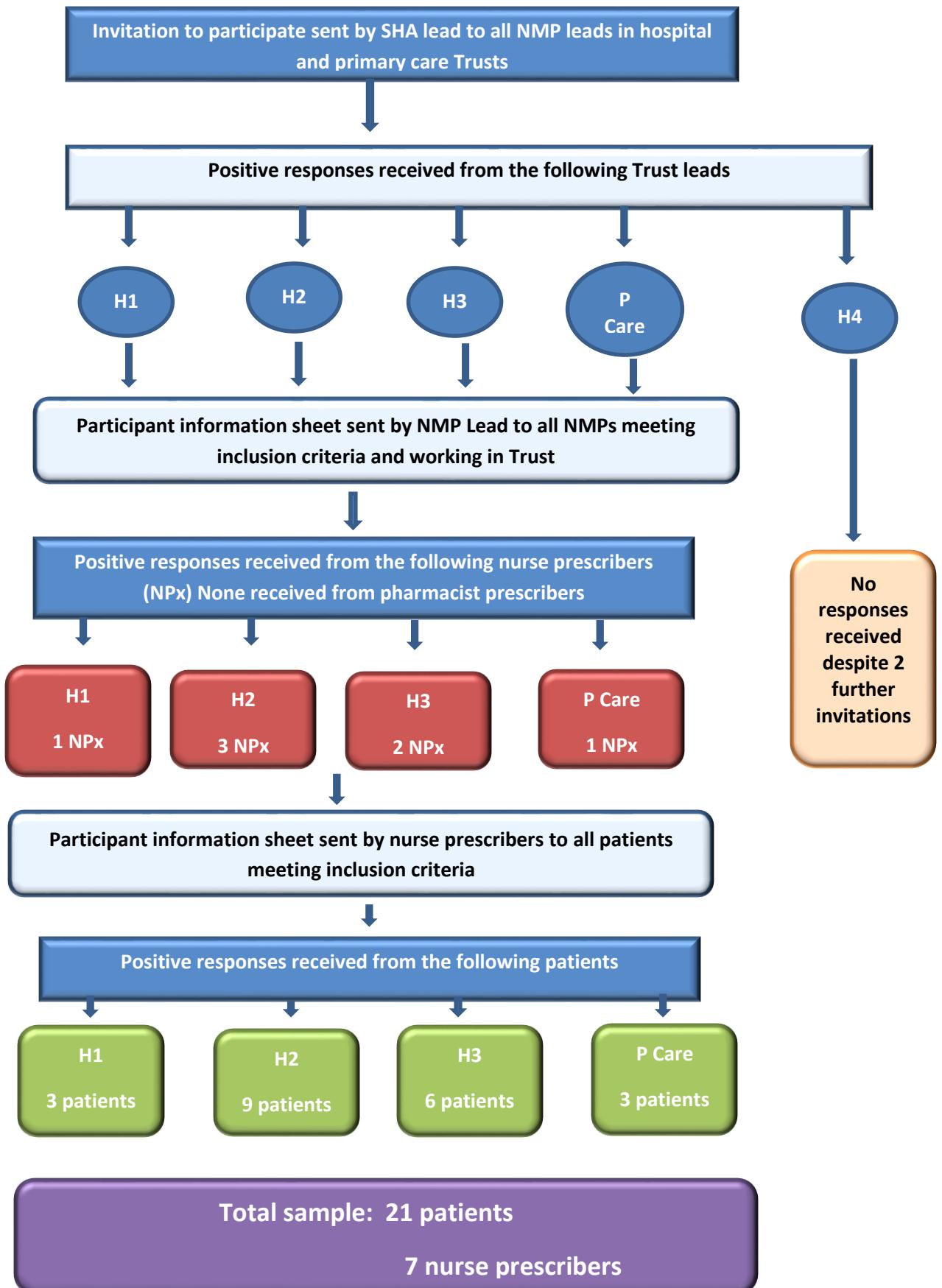
Further discussion of the study took place with patients immediately before their appointment and written consent to participate in the study was obtained. (See appendix 3 for details of communication with patients). Patient participants were asked to consent to one of the following:

- Participation in the observation only
- Participation in the interview only
- Participation in both the observation and interview.

All 21 patients agreed to participate in both the observation and interview.

A flowchart of the sample recruitment process is outlined in figure 4.1 below and participant characteristics are described in section 4.6.2.

**Fig. 4.1 Summary of sample recruitment process**



#### 4.6.2 Sample description

Participant characteristics are summarised in tables 4.5 and 4.6 below.

##### 4.6.2(i) *Patient participants*

The sample of patients included nine males and 12 females. The group had an average age of 63 years (range 35-82 years) although most patients were aged over 60 years old. All patient participants were white, with one participant being of Turkish origin. Patients were living with a range of long-term conditions, with eight participants experiencing more than one chronic condition.

All of the patients involved in this study took one or more medicines. Many were also required to follow a number of other therapeutic interventions to manage their condition. Whilst patients with chronic obstructive pulmonary disease generally used the most medications, the majority of participants took more than four medications.

A wide range of medicines was used, including inhaled medicines, those taken orally and medicines used via injection. Patients took an average of 5 medicines per day (range 2-13) with patients with respiratory conditions using the greatest number of medicines. Nine patients had further 'rescue' medications that were to be used only during an exacerbation of their condition. Seven patients received an additional prescription during their consultation and one patient was issued a prescription for additional antibiotics to cover an on-going infection. (See Table 4.5 below for patient characteristics and for the medicines and other therapeutic interventions used by each patient).

Table 4.5: Sample characteristics: Patient participants (see glossary of terms for explanation of conditions and medicines)

Patient	Nature of long-term condition	Medicines used at time of consultation		Other treatment interventions
Anne 82 years	Chronic obstructive pulmonary disease (COPD) for many years High blood pressure Previous myocardial infarction Glaucoma Continence problems	<b>Inhalers:</b> Salbutamol Seretide Tiotropium <b>Tablets:</b> Prednisolone Phyllocontin Carbocisteine	<b>Tablets cont'd.:</b> Alendronic acid Omeprazole Simvastatin Aspirin Lumigan eye drops <b>Symbicort inhaler prescribed during consultation</b>	Has rescue medication of antibiotics and oral steroids
Beverley 79 years	COPD for 6 years Temporal arteritis High blood pressure Previous myocardial infarction Osteoporosis Glaucoma	<b>Inhalers:</b> Salbutamol Seretide Atrovent <b>Tablets:</b> Furosemide Moxonidine Atorvastatin Lansoprazole	<b>Tablets cont'd.:</b> Amitriptyline Alendronic acid Aspirin Lumigan eye drops <b>Domperidone prescribed during consultation</b>	Has rescue medication of antibiotics and oral steroids To start pulmonary rehabilitation programme
Christopher 69 years	COPD for over 20 years Type 2 diabetes for 2 years.	<b>Inhalers:</b> Salbutamol Seretide Tiotropium Nebulised ventolin also <b>Tablets:</b> Metformin		Has rescue medication of antibiotic and oral steroids Previously completed pulmonary rehabilitation programme

Patient	Nature of long-term condition	Medicines used at time of consultation		Other treatment interventions
Diane 35 years	Type 1 diabetes for 28 years since aged 7.	Insulin injections Glucagen available for use in severe hypoglycaemic episode		Self-monitoring of blood glucose (BG) Calculation of insulin dose according to BG level, exercise and carbohydrate intake Offered structured education programme but would not take part as would involve taking leave from work
Eric 67 years	Type 1 diabetes for 34 years High cholesterol	Insulin injections Simvastatin		Self-monitoring of blood glucose (BG) Calculation of insulin dose according to BG level, exercise and carbohydrate intake Previously completed structured education programme (IDAC)
Frances 68 years	Type 2 diabetes for 2 years High blood pressure	<b>Tablets:</b> Metformin Simvastatin Aspirin Ramipril		Self-monitoring of blood glucose (BG) Restricted carbohydrate and fat intake in diet
George 50 years	Type 2 diabetes for 3 years. (Patient argues that he has type 1 diabetes)	Insulin injections <b>Tablets:</b> Simvastatin	<b>Tablets cont'd:</b> <b>Metformin prescribed during consultation</b>	Self-monitoring of blood glucose (BG) Calculation of insulin dose according to BG level, exercise and carbohydrate intake
Harry 68 years	Type 2 diabetes for several years. High blood pressure Heart failure Previous myocardial infarction and deep venous thrombosis	Insulin injections Tablets: Ramipril Atorvastatin Aspirin Champix	<b>Tablets cont'd:</b> Furosemide Spironolactone	Self-monitoring of blood glucose (BG) Calculation of insulin dose according to BG level, exercise and carbohydrate intake
Ivan 48 years	Male, 48 years Chronic kidney disease (CKD), since a child	<b>Tablets:</b> Atorvastatin Calcichew Iron	<b>Tablets cont'd:</b> <b>Folic acid prescribed during consultation</b>	Dietary and fluid restrictions

Patient	Nature of long-term condition	Medicines used at time of consultation		Other treatment interventions
	Receiving dialysis and awaiting transplant	EMLA cream used at time of dialysis		
John 52 years	CKD for 5 years due to high blood pressure Receiving dialysis and awaiting transplant	<b>Tablets:</b> Bisoprolol Folic acid Furosemide Calcitriol	<b>Tablets cont'd:</b> Lanthanum Simvastatin Aspirin <b>Bisoprolol prescribed during consultation</b>	Dietary and fluid restrictions
Keith 47 years	CKD for 6 years due to high blood pressure Receiving dialysis and awaiting transplant from sister	<b>Tablets:</b> Amlodipine Folic acid Furosemide Quinine	<b>Tablets cont'd:</b> Lanthanum <b>Sevelamer prescribed during consultation</b>	Dietary and fluid restrictions
Linda 64 years	CKD since a child Has refused dialysis. Awaiting transplant.	<b>Tablets:</b> Aranesp Calcitriol Losartan	Others: Sodium bicarbonate solution (taken orally)	Dietary and fluid restrictions
Mary 63 years	Bronchiectasis since a teenager	<b>Inhalers:</b> Bricanyl inhaler Nebulised salbutamol Nebulised gentamicin	<b>Tablets:</b> Doxycycline Carbocisteine Sterimar nasal spray	Has rescue medication: Co-trimoxazole and Clarithromycin (antibiotics) Prednisolone Chest physiotherapy
Nina 39 years	Bronchiectasis since her early 20's. Endometriosis	<b>Inhalers:</b> Fostair <b>Tablets:</b> Erythromycin Provera Calcitriol	<b>Additional erythromycin was prescribed during the consultation as an increased dose was required for an on-going infection</b>	Has rescue medication: Co-trimoxazole and Azithromycin (antibiotics) Prednisolone Use of intravenous antibiotics agreed if further exacerbation
Olive 69 years	Bronchiectasis since a child	Inhalers: Seretide	Tablets: Bendroflumethiazide	Has rescue medication: Ciprofloxacin and Co-Amoxiclav (antibiotics)

Patient	Nature of long-term condition	Medicines used at time of consultation		Other treatment interventions
	High blood pressure Anxiety	Tiotropium Salbutamol	Lisinopril Zopiclone Omeprazole Nasacort nasal spray	Prednisolone Chest physiotherapy
Peter 72 years	Lung cancer diagnosed 2 years ago. Type 2 diabetes High blood pressure and previous myocardial infarction Osteoarthritis	Tablets: Metformin Gliclazide Amitriptyline	Tablets cont'd: Fentanyl patches Also uses oxygen at home	
Rita 64 years	Lung cancer diagnosed in left lung 7 years ago and in right lung 2 years ago Previous removal of pancreas (causing secondary diabetes) and spleen	Insulin injections Tablets: Creon Omeprazole		Self-monitoring of blood glucose (BG) Calculation of insulin dose according to BG level, activities and carbohydrate intake
Steve 62 years	Lung cancer diagnosed 3 years ago COPD Depression	Inhalers: Seretide Tiotropium Salbutamol	Tablets: Ramipril Simvastatin Warfarin	
Tina 74 years	COPD for many years	Inhalers: Seretide Salbutamol	Tablets: Alendronic acid Calcitriol	Has rescue medication of antibiotics and oral steroids
Ursula 81 years	COPD for over 13 years. High blood pressure Angina	Inhalers: Spiriva Seretide Nebulised	Tablets cont'd: Alendronic acid Calcitriol Lisinopril	Has rescue medication of antibiotics and oral steroids

Patient	Nature of long-term condition	Medicines used at time of consultation		Other treatment interventions
	Sleep apnoea Osteoporosis Bronchiectasis	salbutamol Tablets: Simvastatin Dusopelin Furosemide Nicorandil Diltiazem Omeprazole	Aspirin <b>Carbocisteine prescribed during the consultation</b>	
Vicky 67 years	COPD, diagnosed 2 years ago.	Inhalers: Salbutamol Seretide Tablets: Champix		

#### 4.6.2(ii) *Nurse prescriber participants*

The sample of nurse prescribers included six females and one male. All of the prescriber participants were of White British origin (see Table 4.6 for summary of prescriber participants).

Of the seven participants, six prescribers worked within a hospital setting and one worked within a General Practice surgery. They were employed mostly at nurse specialist level although two of the prescribers were employed as nurse consultants. The entire sample was highly experienced within their specialist clinical field with a range of experience from five to over 15 years. Participants had a minimum of three years' experience in a prescribing role although the majority of the sample had more than five years' prescribing experience.

One prescriber had also completed a postgraduate qualification as a Physician's Assistant (PA) although she was not currently employed in this capacity (see glossary of terms). In recognition of the additional competencies acquired through this qualification her employing Trust had, however, agreed that she should be able to prescribe a range of drugs in addition to those within the scope of practice associated with her area of nursing expertise. This arrangement allowed her to regularly undertake shifts in the emergency department where she treated patients with a variety of acute conditions and also meant that she managed patients with more complex needs relative to those managed by other nurse prescribers in her clinical area.

Prescriber participants also reported experience in a variety of strategic roles such as Lead Research Nurse within their employing Trust (two prescribers) and membership of a national Department of Health Advisory Group (one prescriber). Two other prescribers had taken a lead role in the development of new services to improve patient care and avoid hospital admission e.g. to support the patient in the self-administration of intravenous antibiotics at home and the establishment of a team to support patients' use of oxygen in the domiciliary setting, which involved extensive negotiation with local health service commissioners.

Table 4.6 Sample characteristics: Prescriber participants

Nurse prescriber	Sex	Specialist area	Length of experience in speciality	Length of experience as a prescriber
Wendy	Female	Respiratory conditions	Over 15 years	6 years
Yvonne	Female	Diabetes	Over 15 years	3 years
Angela	Female	Diabetes	Over 15 years	5 years
Becky	Female	Renal conditions	12 years	7 years
Claire	Female	Bronchiectasis	Over 15 years	5 years
Dawn	Female	Oncology	Over 15 years	5 years
Edward	Male	Respiratory conditions	5 years	3 years

#### 4.7. Non-participant observation of patient-nurse prescriber encounters

Observation of the patient-prescriber encounter took place during a planned, routine appointment in an outpatient clinic or general practice setting. Such consultations are the most common healthcare encounter and there is evidence that their frequency is increasing on a yearly basis (HSCIC 2008, HSCIC 2013, NHS England 2013). Such characteristics thus enabled observation and understanding of the ways in which patients' use of medicines was commonly managed in the health care setting.

The majority of patients were attending for a routine review appointment although the frequency of the appointments varied according to the condition experienced by the patients. Patients with diabetes and COPD were therefore attending for an annual review appointment whilst those with bronchiectasis and cancer were routinely reviewed on a three-monthly basis. Patients with renal disease were similarly reviewed in the out-patient clinic every three months although they were also seen by the nurse prescriber on a weekly basis when attending for dialysis. Three patients experiencing COPD were seen due to a referral by their general practitioner for consideration of their suitability for pulmonary rehabilitation or

improved symptom control. Further examination of the nature of patients' consultations is provided in section 5.1.

The role sought within the consultations was initially one of 'complete observer' to minimise any impact on the actual interaction (Gold 1958). Thus a position was taken in the room which allowed full observation of the encounter but which was not in the line of sight of either the prescriber or patient. No part was taken in the consultation unless engaged in social conversation by either party. As the consultations progressed however the challenges involved in such a simple classification of observer roles became apparent (Coffey 1999). Certain patients, for example, wished to explain their symptoms further or would seek the involvement of everyone in the room in humorous banter that was a feature of some interactions. A small number of prescribers also took the opportunity to explain the significance of certain aspects of the patient's condition or their treatments. In such situations it was necessary to respond to patients and prescribers to respect social conventions and to foster rapport with participants. Sensitivity to the needs of the prescriber to continue with the consultation was however maintained and any instances of more direct participation was recorded in field notes to enable a reflexive approach when considering their impact on the nature of the encounter (Allen 2010, Mason 2006).

The whole encounter was observed, placing particular emphasis on the nature of the discussion that occurred between the patient and prescriber. Any physical examinations of patients that occurred were not observed. Field notes were not recorded during the consultation but were written as soon as possible after it ended and included information about the patient's condition, their prescribed medicines and a summary of the main points discussed during the consultation, together with any personal thoughts or feelings that were stimulated by observation of the encounter. In most research sites only one patient encounter was observed at each visit to the site which meant that field notes could be recorded immediately after the consultation ended. In two sites, all of the patients who agreed to participate in the study had appointments immediately after each other during the same clinic session. Brief notes were maintained during the consultation and full field notes were then written at the end of the session.

Whilst many authors provide a detailed list of factors that should be included in an observation exercise, it was believed that the largely unstructured approach to observation used here would enable a focus on the interaction occurring within the

encounter as this was the key source for data collection. An unstructured approach would also enable a sensitivity to all that was happening within the encounter.

Audio-recording of the consultations was undertaken to ensure that all elements of the interaction were available for analysis. Encounters were recorded using two digital voice recorders to ensure any loss of data was minimised (Olympus VN-8700PC™ and Philips Voice Tracer LFH0662™). Whilst some analysts argue for the use of video recording to ensure non-verbal data such as facial expression can be collected (e.g. Heath et al 2010) it was not believed to be a practical option in this study. The timeframe for the study meant that it was not possible, for example, to gain any knowledge of likely research settings prior to developing the application for research ethics approval and it was therefore difficult to be confident that video-recording was feasible.

Following observation of the encounters, individual, semi-structured interviews then took place with patients and prescribers and these are considered further below. Patient interviews occurred after their consultation and prescribers were interviewed once all of their consultations with participating patients had been observed.

#### **4.8 Conduct of semi-structured interviews**

The range and complexity of the differing explanatory frameworks related to patients' use of medicines and the limited evidence relating to the ways in which patient and nurse prescribers construct and manage this issue have been explored in chapters 2 and 3. The study was therefore developed to examine the societal discourses that underpinned the views and approaches of both groups of participants. Interviews focused on a broad range of issues, identified from the literature, which were associated with patients' medicines use and the ways in which this might be supported. Whilst patients were asked a general question about their views of the support they received from the nurse prescriber the interview did not focus on the patients' views of the encounter which was observed since evaluation of the prescriber's practice was not the focus of the study.

Individual interviews were conducted with both patients and nurse prescribers using an interview topic guide consisting of a small number of open-ended questions, together with a number of prompts (see appendix 4). Interviews were conducted

with both patients and prescribers and were recorded using the digital voice recorders described above.

The interviews took place in a venue that was convenient for each participant and where his/her privacy and comfort could be ensured. Interviews with patients were conducted mostly in the patient's home and occurred at a convenient time after their appointment with the prescriber. In one setting (a hospital Trust) two prescribers arranged for a consultation room to be available for the researcher and interviews with six patients therefore took place in the out-patient setting, immediately following the encounter. There appeared to be no substantive differences between the nature of the interviews conducted in each setting although interviews that took place in the patient's home were more likely to include discussion of matters outside the research focus such as patients' hobbies or family matters. Most prescriber interviews took place in a quiet consultation room at their place of work. Two prescriber interviews were held in the prescriber's office.

Prior to the commencement of each interview time was spent in general conversation with the participant, to enable him/her to feel relaxed and safe within the interview setting, a necessary condition for the participant to share information freely (Kvale & Brinkmann 2009). Our previous meeting, during their out-patient appointment, facilitated this process for many patients and most participants volunteered information about progress since their consultation.

Interviews were conducted in an informal, conversational manner to enable diversity in participants' responses rather than consistency (Potter & Wetherell 1987). Participants were initially reminded of the focus of the research, assuring them of the confidentiality of their responses. Confirmation was sought that they were happy for the interview to take place. The order in which questions were asked was not fixed apart from the opening question. Nurse prescribers were initially asked to talk about their prescribing role and patients were asked to talk about the condition that had been the focus of their encounter with the nurse prescriber. The order of subsequent questions depended on how the interview developed, with particular topics being introduced when it appeared logical and appropriate within the interview context to do so. Whilst I was used to using such an interview approach in my previous practice as a health visitor, use of a conversational approach to the research interview proved challenging initially, reflecting the findings of Roulston et al (2003) with novice interviewers. An *aide-mémoire* was developed and used to ensure that all relevant issues were covered within the interview and to ensure that

the interaction remained a research interview and not simply a conversation (Mason 2006).

As previously noted the discussion could at times cover issues that were strictly not relevant to the research focus such as a forthcoming family wedding or their work for a local charity. Such matters were helpful in understanding the patients' social context although it was necessary to ensure that the interview topics were explored by carefully drawing the discussion back to the research focus. It was however felt to be important, on ethical grounds, to allow the participants to talk about the matters they raised since they had been told that their thoughts and views were important at the beginning of the interview. The following section discusses further the ethical principles that guided the data collection methods and examines any specific ethical issues that emerged during data collection.

#### **4.9 Ethical considerations**

As the research involved NHS patients and staff, ethical approval for the study was sought and agreed by one local National Health Service Research Ethics Committee (REC Reference: 10/H0302/45). Research management and governance approval was obtained from each of the Trusts that participated in the study (see appendix 5 for research approvals).

Ethical considerations focused on the four principles of respect for autonomy, beneficence, non-maleficence and justice, which are dominant in Western societies and are particularly appropriate for biomedical research (Beauchamp and Childress 2009). Several authors (e.g. Iphofen 2011, Kvale & Brinkmann 2009, Mason 2006) emphasise the sustained nature of ethical decision making in qualitative research, since unanticipated ethical dilemmas can emerge during the conduct of the study. Table 4.7 below illustrates the strategies that were adopted within the study to fulfil the main ethical principles. The practical application of such strategies is then discussed in more detail, illustrating the sustained, situated judgement (Mason 2006) that was required at particular times in data collection.

Table 4.7 Application of ethical principles in the research study

Ethical Principles <sup>1</sup>	Research Ethics Guidelines <sup>2</sup>	Strategies used within the study
Respect for autonomy	Ensuring participants choose freely and are fully informed about the research	<ul style="list-style-type: none"> <li>1. A full explanation of the study's aims, methods and possible outcomes was provided through participant information sheets containing clear information about the purpose of the research, its procedures, possible risks and benefits</li> <li>2. The ability to withdraw at any time with no consequence was emphasised in both written &amp; verbal information about the study.</li> <li>3. Participants were given the opportunity to discuss their involvement in the study prior to the consent process.</li> <li>4. Signed consent to participate was obtained from each participant prior to the commencement of the study</li> </ul>
Beneficence	Guarantee privacy, dignity, confidentiality and anonymity	<ul style="list-style-type: none"> <li>1. Privacy was ensured during the period of data collection and individual participants were treated with respect throughout the study.</li> <li>2. As the study involved personal interviews and observation, full anonymity was not possible (Speziale &amp; Carpenter 2007). The researcher however sought to ensure complete confidentiality.</li> <li>3. Hard copies of data transcripts did not therefore identify individual participants and were stored in a locked drawer in the researcher's office, in line with the requirements of the Data Protection Act (DoH 1998). Computer records were maintained on a password protected computer, to which the researcher only had access.</li> <li>4. The research site or participants will not be identified in any publication or report of the study (DoH 2005b).</li> </ul>
Non-maleficence	Limiting the risk of harm	Whilst there were no particular risks of harm anticipated within the study it was recognised that protecting the participant from psychological harm or distress could be an issue within a qualitative study, which inevitably, probes into the private thoughts and feelings of the participants (Liamputpong 2007). Participants were allowed to stop data collection, if wished and advice would be given about on-going support as necessary. In practice this was not required.
Justice	Equity of treatment	<p>All participants were treated in the same manner and no individual was excluded on the grounds of disability, gender, sexual orientation, race, culture or religion (DoH 2005b). Certain groups of individuals were excluded for the following reasons:</p> <ul style="list-style-type: none"> <li>-Individuals under the age of 18 were not included as the process of facilitating medicines' use is likely to be different in children and adolescents.</li> <li>-Individuals with a long-term mental health condition were not included as the process of facilitating medicines' use is likely to be different in people thus affected.</li> <li>-Individuals who require an interpreter were excluded from the study due to the availability of resources</li> </ul>

1. Source: Beauchamp &amp; Childress (2009)

2. Source: Department of Health (2005b)

#### 4.9.1 Ensuring fully informed consent

Arrangements were in place to ensure that potential participants received full written information about their involvement in the study and were able to ask any further questions of the researcher, prior to signing a consent form. Consent in this study was re-negotiated throughout the data collection process, including prior to the interview. Process consent of this nature allows participant autonomy to assume a greater significance and enables a collaborative approach to participants' decisions about their involvement (Royal College of Nursing 2011, Wiles et al 2007).

Consent was also re-negotiated during the interview if the participant appeared to be uncomfortable for any reason. For example two participants needed to use their inhalers during the interview due to breathlessness and were asked whether they would prefer that the interview was stopped. Both participants confirmed that they wanted it to continue.

Participants were also asked to consent explicitly to the recording of both the consultation and the interview, which was a specific requirement for Research Ethics Committee approval. Signed consent for recording was obtained prior to the collection of any data and was re-negotiated verbally at the start of both the consultation and interview. Rapley (2007) highlights that participants can often feel pressurised into accepting the recording of consultations, feeling that their refusal might adversely influence the nature of the encounter. Consent for the recording was given without any hesitation by the majority of participants. Whilst she had given consent to the recording, one of the prescribers appeared very uncomfortable when the digital recorder was produced and reassurance was given that the recording need not happen. She confirmed however that it should go ahead.

#### 4.9.2 Strategies to ensure confidentiality

As several of the prescriber participants and research sites involved in the study had particular distinguishing features such as the nature of their strategic activities or their specialist clinical focus, it was decided that the sites would be referred to in general terms only with no specific details being attributed to any site within the report. Whilst it is recognised that full representation of the data obtained is seen as important in ethical qualitative research (Kvale & Brinkmann 2009), safeguarding anonymity and confidentiality was essential and the details withheld to enable this protection were believed to have very little influence on the integrity of the findings.

#### 4.9.3 Situated ethical judgements

Research in the clinical area can cause conflict for the researcher when they are also a registered clinician in that research interests may challenge the duty of care the practitioner has to the patient, as required within their professional code (Casey 2004). During the first interview it became apparent that the patient expected advice regarding their use of medicines and was advised to return to the prescriber. The introduction to subsequent interviews then emphasised my role in nurse education rather than clinical practice.

The need to intervene in care when a patient's welfare is at risk is a common dilemma for those nurse researchers involved in research in the clinical area. This issue had been raised by the Research Ethics Committee and it was agreed that a statement would be included in the patient information sheet pointing out that if it became apparent that certain actions on their part placed them at risk, the prescriber would need to be informed. Similarly, if practice on the part of the prescriber that could cause harm to patients was observed, the non-medical prescribing lead within the Trust would be informed and a statement to this effect was placed in the prescriber information sheet. During the study, no instances of potentially harmful practice were observed in prescribers. Three patients were referred back to the prescriber as they had queries regarding their medicines.

### 4.10 The process of analysis

#### 4.10.1 Development of written transcripts

All interviews and encounters were transcribed, on a word-by-word basis, to produce a written record of the spoken interaction. A small number of both interviews and encounters were transcribed personally to develop familiarity with the data and were transcribed soon after the encounter or interview took place. However the well-documented challenges of transcribing interview and encounter data in terms of time and other resources were soon apparent (Bryman 2012, Kvale & Brinkmann 2009). The majority of transcripts were therefore developed by a transcription agency and a number of steps were taken to ensure this would not compromise the quality of the transcripts produced (Burke 2011). A reputable transcription agency was therefore used which had considerable experience in the transcription of research data. The agency offered a signed agreement

guaranteeing the confidentiality of all the research materials it handled and a secure means of transfer for both audio-recordings and transcripts, thus ensuring that there were no ethical concerns involved.

The accuracy of the printed transcripts was ensured by repeated reading and correction of them, whilst listening to the audio recording (Burke 2011). This was undertaken a minimum of four times per transcript. Whilst a detailed microanalysis of the verbal interaction was not planned (see section 4.10.2) the transcripts were annotated to indicate any readily apparent speech characteristics. Thus any emphasis on words was marked by underlining the word/phrase and any speech overlaps or interruptions were noted in the margins. Transcripts developed in this way were then used within the analytic process.

The widespread commitment to openness and transparency in research is acknowledged (e.g. Finch Group 2012, National Institute of Health Research (NIHR) 2014, Research Councils UK 2015, UK Higher Education Funding Councils 2014) although it is important to note that confidentiality and anonymity of research participants remain essential requirements. NIHR (2014) for example, outline the expectation that every funded project should include explicit plans to enable other researchers to have access to data, although it does not require data to be made openly available (NIHR 2014). Raw data is not presented within this submission since University regulations require it to be available via the University's research archive through which research can be viewed and downloaded freely by students and researchers across the world. Given the small and highly specialised area of this study it is believed that such access may mean that aspects of the information contained within the transcripts inadvertently allow the participants or research sites to be identified, thus compromising the anonymity and confidentiality of participants and contravening the terms of ethical approval. The arrangements for access to transcripts of encounters and interviews are outlined in appendix 6 and require confirmation of the ways in which anonymity and confidentiality will be ensured by any researcher requesting access to the data.

#### 4.10.2 Thematic analysis

As explored in section 4.1 many approaches to discourse analysis include a detailed micro-analysis of the interaction occurring within the encounter. This form of analysis was judged to be inappropriate in the current study due to its interest in the wider discourses that influenced the ways in which patients' use of medicines was managed within the encounter. The form of analysis adopted was therefore

based on Antaki's (2008) description of the four key features of generic discourse analysis (see Table 4.2), which outline broad considerations when undertaking analysis.

Authors generally demonstrate caution in providing explicit instructions or 'mechanical guidance' for the process of discourse analysis (Potter & Wetherell 1987:168). Potter (2004:204) highlights the need for an 'analytic mentality', describing the discourse analytic process as a 'craft skill... more like sexing a chicken than following the recipe for a mild Chicken Rogan Josh'. Whilst it is acknowledged that detailed guidance about a particular analytic approach has the potential to minimise the complexity of the analysis, more structured advice about qualitative analysis was sought since, as a research student, it enabled the process to be more accessible (Braun & Clarke 2006). In addition, the framework for rigour adopted within the study required transparency in the methods of analysis (Nixon & Power 2007, see Section 4.4) and a more clearly defined approach to analysis was therefore essential.

Braun and Clarke (2006) emphasise the value of a comprehensive and explicit framework for thematic analysis in order to overcome a common criticism that 'anything goes' in qualitative research, particularly discourse analysis (Antaki et al 2003:2). The framework they propose was adopted within this study (see Table 4.8 below).

The framework describes six phases of qualitative thematic analysis, although analysis is emphasised as a recursive activity in which writing is an integral part of analysis. The framework enables either inductive, data-driven, 'bottom-up' analyses or deductive, theoretical, analyst-driven, 'top-down' approaches to analysis (Braun & Clarke 2006). This latter form of analysis is of particular relevance to the constructive approach adopted within this study as it allows the examination of the broader, underlying social assumptions and conceptualisations that underpin what is discussed in both the interviews and encounters. Such an analysis does not seek to 'focus on motivation or individual psychologies, but instead seeks to theorise the socio-cultural contexts, and structural conditions, that enable the individual accounts that are provided' (Braun & Clarke 2006:14). It has however already been noted (see section 4.1) that the encounter between patient and nurse prescriber is relatively under-researched and therefore, given the exploratory nature of the study, analysis was also sensitive to descriptive themes evident within the data.

Table 4.8 Process of thematic discourse analysis

Phase	Description of Activity
<b>1.Developing familiarity with data</b>	Reading and re-reading of transcripts. Notes made of possible codes
<b>2. Generating initial codes</b>	Coding interesting features of the data in a systematic fashion across the entire data set, collating data relevant to each code. An inclusive process and also important to retain accounts that depart from dominant story
<b>3.Searching for themes</b>	Collating codes into potential themes, gathering all data relevant to each potential theme.
<b>4.Review of themes and development of thematic map</b>	Review of themes to ensure they are coherent and meaningful, with clear and identifiable distinctions between themes. Conducted at level of coded extracts (level 1 review) and themes(level 2 review) to generate a 'thematic map' of the analysis
<b>5.Defining and naming themes</b>	On-going analysis to refine each theme and generate clear definitions and names for each. Further revision of the overall analysis as required.
<b>6.Producing the report</b>	The production of the research report provides a final opportunity for further analysis.

Source: Braun & Clarke (2006)

Throughout the process of analysis the tools available within the qualitative software, NVivo™ (version 10 © QSR International) were used to assist data interrogation. The tools used frequently included the coding function, memo development and modelling tool. The ability to add the audio-recordings to the project database also facilitated the ability to listen to the recordings whilst undertaking the analysis. Many other tools are available within NVivo (Bazeley & Jackson 2013) but their use was not found to facilitate the analytic process.

The analysis took place as follows and the development of initial codes and themes is illustrated in Appendix 6. Analysis of the encounter and interview datasets was initially undertaken separately to ensure full consideration of data from the encounter, a key focus within the research question and to enable sensitivity to other issues that might emerge within the interviews. The resulting codes and emergent themes were however recorded within one folder within the NVivo™ database to enable the eventual integration of the analysis from each source.

### *1. Developing familiarity with the data*

The transcripts were read through at least four times whilst listening to the audio-recordings, a strategy which was found to facilitate the identification of significant

points or statements. Written notes were made about issues of interest and possible codes that were apparent in the transcripts.

## *2. Generating initial codes*

Codes were developed based on elements of the data that appeared interesting and relevant to the study's focus. Codes were identified from both encounters and interviews together with those that were common to both data sets. Both semantic codes which were interesting in descriptive terms and latent codes which potentially reflected underpinning discourses were noted (Braun & Clarke 2006). Coding took place on an inclusive basis so that segments of surrounding data were included in each code to illustrate the context of what was being said. Care was taken to ensure the inclusion of data segments which did not support the focus of identified codes.

## *3. Searching for themes*

The process of searching for themes began once all of the encounters and interviews had been coded. This was an active process, involving the identification of possible themes amongst the codes and also ensuring that the themes reflected the coded data extracts. Several iterations of the thematic structure occurred at this stage as the relationships between codes and themes were reviewed extensively and the levels of each theme were assessed to determine overarching themes and sub-themes. The codes and preliminary themes identified are presented in appendix 6.

## *4. Review of themes and development of thematic map*

Review was then undertaken of all collated codes for each theme apparent within each data set (Braun & Clarke 2006). Codes were reviewed to ensure that they formed a coherent pattern. Any codes that were not congruent with the emergent pattern were examined further to identify whether they were characteristic of another theme or whether the theme itself needed to be re-developed. Analysis then focused on the themes identified, considering the extent to which there was sufficient data to support each theme and whether themes were coherent and meaningful. Clear and identifiable distinctions between each theme were also sought. Where necessary, themes were merged or re-organised to achieve the required definition of the themes. A thematic map was identified for each of the encounter and interview data sets. Further review of all themes was then

undertaken to identify a meaningful and coherent organisation that characterised both data sets and a final thematic map was developed.

### *5. Defining and naming of themes*

This stage of analysis involved further refining and definition of the themes. Each theme was subject to a detailed analysis involving returning to the collated data extracts and organising them into a coherent and consistent narrative account of the theme's nature and function.

This process resulted in the development of several themes and the identification of potential discourses although, as suggested by Braun & Clarke (2006), further analysis also occurred whilst writing up the analysis and the final themes and discourses identified are explored in the following chapters.

### **4.11. Summary**

This chapter has justified the use of a generic approach to discourse analysis and highlighted the subsequent need for a coherent strategy to facilitate rigour. The approach to ensuring rigour within the study was justified, including the use of two forms of textual data within the study. A comprehensive overview was provided of the ways in which the data were collected, including the sampling strategy and the nature of the sample recruited to the study. The ethical principles and practice underpinning the conduct of the study were outlined together with examples of situated ethical judgement. The chapter concluded with a discussion of the analytic process.

The findings of the study are presented in the following two chapters. As already discussed analysis of the encounter and interview data was initially undertaken separately and the results from each analysis are explored in chapters 5 and 6 respectively. The overall analysis of findings from both data sets is then discussed in chapter 7.

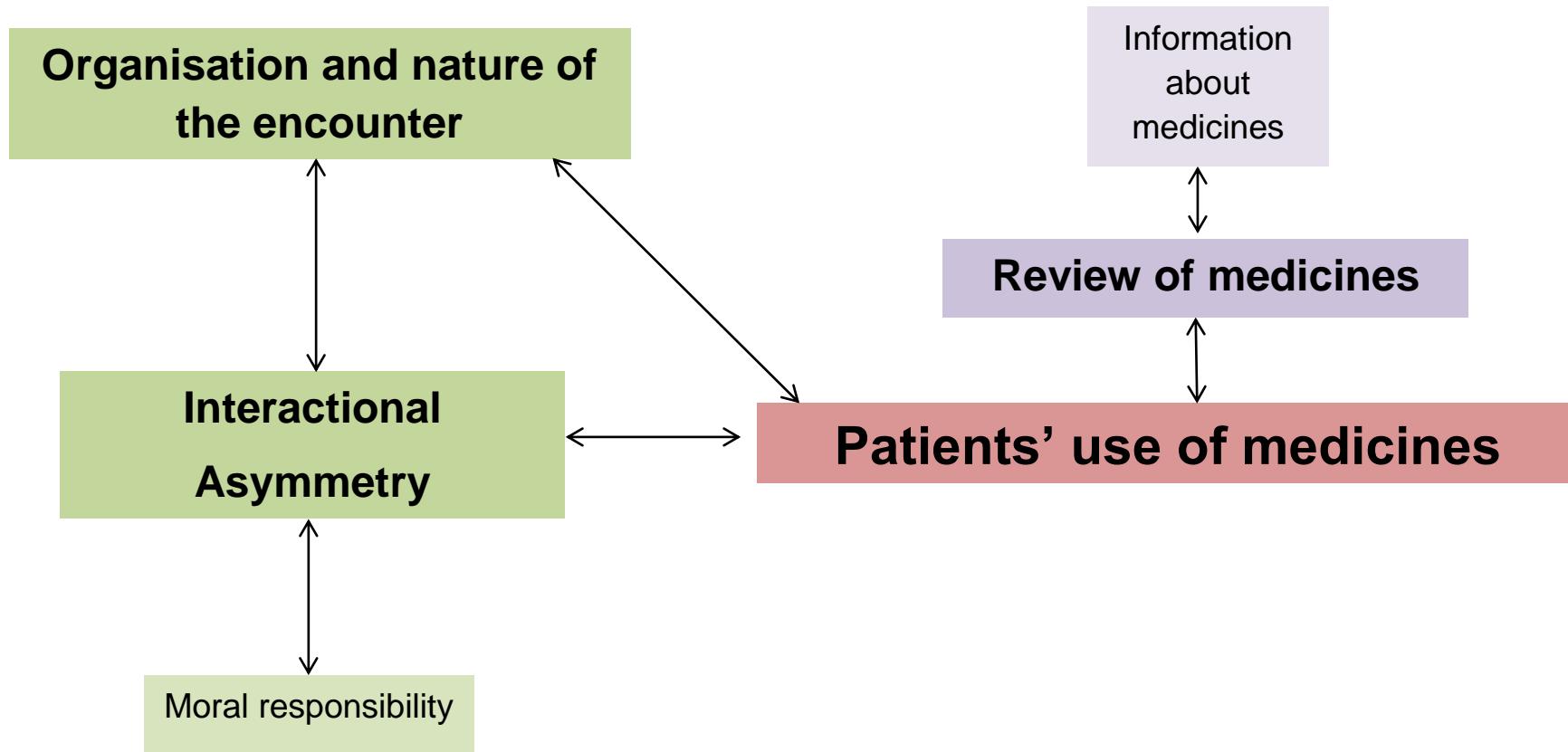
## CHAPTER 5: FINDINGS FROM PATIENT-NURSE ENCOUNTERS

This chapter presents the analysis of the observation of the patient-prescriber encounters which sought to identify the ways in which patients' use of medicines was managed by both patients and prescribers within the encounter. This issue is the key focus within the study and unstructured observation of the encounter enabled an open-ended approach to data collection so that sensitivity to all aspects of the interaction was possible. The thematic map developed from the analysis of the encounter data is presented overleaf and the themes and sub-themes identified are explored within this chapter.

The characteristic organisation of the encounter and its typical nature is first examined showing that the encounters generally took place in the context of a warm relationship, often developed over a long period. Patients' use of medicines was a major theme within the encounters although the review tended to focus simply on whether the medicines were being taken rather than exploring patients' experience of using them and minimal acknowledgement of the potential that medicines were not being taken appropriately. A sub-theme focused on the provision of generally detailed information about the patient's condition and medicines was identified although the information shared tended to ignore the patients' existing level of knowledge. There were several attempts made by patients to assert their understanding and it is suggested that there was evidence of patient resistance to the information provided.

Whilst a detailed analysis of the verbal interaction was not undertaken, evidence suggesting interactional asymmetry within the encounter was readily apparent. Analysis of the discourses used by both patients and prescribers was undertaken to ascertain the assumptions. Patients tended to use discourses derived from their everyday lives which is described as the Voice of the Lifeworld (Mishler 1984). The use of such discourses however tended to be blocked or ignored by prescribers who used a biomedical discourse, the Voice of medicine, demonstrating a technical, rational approach to the patient's condition. Patients' use of a moral discourse was also evident in which they portrayed themselves as adopting a responsible approach to managing their everyday lives in the context of their condition.

Fig. 5.1: Final thematic map: Encounter data



The nature of such discourses and their implications for the interaction within the encounter are explored.

### **5.1 Organisation and nature of the encounters**

As previously discussed the majority of the encounters were associated with regular appointments to review the patients' condition and took place in the context of an established relationship with five of the prescribers having known the patients for a period of between two to fourteen years. Three encounters for patients with respiratory disease took place in response to referrals from the general practitioner for reasons such as poor control of symptoms and consideration of the patient's acceptance on the pulmonary rehabilitation programme. Such appointments were therefore generally the first meeting between patient and prescriber, although the prescriber had worked with one patient in the past in her previous role as a practice nurse. Four patients with diabetes were seen in the Diabetes Centre for routine review, three of whom were known to the prescriber from previous review appointments.

Encounters had an average length of 24 minutes (range 12-56 minutes) suggesting that nurse prescribers do not experience the same time pressures within an encounter as, for example, a general practitioner (Royal College of General Practitioners 2013). Time available for their role was however an issue that several prescribers highlighted within interviews as a factor that either constrained or supported their practice and the issue of time will be discussed further in the next chapter.

There was an identifiable overall structure to the patient-prescriber encounters as identified in figure 5.2 below, which was similar to that identified within patient-physician encounters in the context of acute primary care visits (Heritage & Maynard 2006a, 2006b, ten Have 1989, ten Have 2006). It is important to emphasise that, as Heritage and Maynard (2006a:15) note, the structure is presented as a means to understand the nature of the encounter and not as a 'Procrustean taxonomy' since there was, for example, some variation in the specific order of the stages involving the review of the patient's condition and his/her medicines. The prescribers would also return to an earlier stage in response to new topics introduced by the patient or if queries were raised (Harvey & Koteyko 2013).

*Figure 5.2 Overall structure of the patient- nurse prescriber encounter*



Encounters in which the patient was not known to the prescriber involved a similar structure although the opening sequence involved a review of the GP's referral letter or a request to the patient to describe the nature of their condition. The structure therefore showed a similar pattern to those focused on physician-patient encounters (Heritage & Maynard 2006a, 2006b, ten Have 1989).

Patient-prescriber encounters generally involved verbal interaction only. Physical examination of the patient took place routinely only for the four patients with a renal condition and for three further patients when their response to the prescriber's queries suggested a worsening of their symptoms. Medicines were prescribed in eight encounters and are explored further in section 5.2 below.

As already discussed many patient and prescribers had a long-term relationship developed over several years at times. The relationship could be characterised as warm with patients frequently sharing with me how helpful they found the prescriber (extract from field notes). Prescribers appeared to know longer-term patients very well and had an in-depth knowledge of their past medical history. Field notes show

that the patient information shared with me prior to the consultation included information about their family circumstances and personal interests. Prescribers appeared to make a particular effort to create a rapport with patients they had not previously met and humour was frequently used in affiliative terms to foster the relationship as demonstrated below (extracts included in the following sections are generally quoted verbatim although they have been subjected to minimal editing to enable clarity and understanding):

Wendy (*Respiratory NPx*): How old are you now?

Beverley (*New respiratory patient*): 90..erm no..

Wendy: I was going to say you're blooming good for that, you're telling me stories already

Beverley: 79

Wendy: 79, you're a blooming good 79 as well aren't you. I need your skin regime, I have to say [all laugh]

Humour characterised many of the encounters. In common with previous studies in this area, mostly involving doctors and patients, many of the humorous exchanges were initiated by the patient (Haakana 2002, West 1984). Prescribers generally responded to the patient's comment however and also instigated a small number of the exchanges, possibly because they had the seniority and experience to feel confident about the risks involved in taking a humorous stance (McCreaddie & Payne 2014) as illustrated below:

Dawn (*Oncology NPx*): Well I have to say you look a different bloke today to the one that...

Peter (*Oncology patient*): Oh well, that's alright; I've been and shaved...

Dawn: Have you?

Peter: But there's a bit [indicates chin]... I've got cut and...[laughs]

Dawn: [to researcher] that's in your honour, not mine [all laugh]

Patients occasionally used humour when referring to any management of their condition which was less than optimal, perhaps as a mean of deflecting attention from the behaviour:

Edward (*Respiratory NPx*): And why has your COPD come about?

Vicky (*Respiratory patient*): Because I had a...

Edward: History of...

Vicky (*Respiratory patient*): Dreadful habit ...oh go on I'll say it, of smoking  
(laughs)

The remainder of this encounter was marked by humour as the patient explained her efforts to reduce her smoking and how she had reached her current situation of not smoking for three days with the support of Champix, which Edward had prescribed. The humour used was largely self-deprecating, a form of humour that may be used by patients to minimise the effect of feelings or behaviours that would otherwise detract from their presentation of themselves as moral and responsible patients (McCreaddie & Wiggins 2009).

Patients' presentation of themselves as moral and responsible was identified as a sub-theme within the encounter data and is explored further below. The ways in which the patients' use of medicines was explored within the encounter are first examined.

## **5.2 Patients' use of medicines**

Every encounter involved discussion of the medicines that the patient was using, although, in contrast to national recommendations to enhance patient adherence (Nunes et al 2009), the review of medicines mostly involved simply asking the patient which medicines he or she was using. In the following example the nurse prescriber (noted in all verbatim extracts as NPx) simply stated the medicines the patient should be taking and there was no exploration of whether the medicines were actually being taken or the patient's experience of using the medicines:

Claire (*Bronchiectasis NPx*): Okay and you're still taking the Seretide, Tiotropium, Salbutamol, Nasacort?

Olive (*Bronchiectasis patient*): Yes

Claire: Now your lung function test shows that...[no further discussion of medicines]

Field notes show that, in the following example, the patient 'sighed and shook her head' when talking about the number of medicines she was required to take but she was interrupted by the prescriber before she could express her feelings or volunteer further information:

Edward (*Respiratory NPx*): Good. What about your tablets?

Ursula (*Respiratory patient*): Got a list of them, haven't you?

Edward: You've got quite a lot

Ursula: Tell me about it [shakes head slowly]

Edward [interrupts Ursula]: So you're taking Simvastatin for your cholesterol. You've got Dosulepin, which you take for your mood

Ursula: Yeah

Edward: Yeah, you just take two of those at night time

Ursula: Yeah

Edward: You've also got Furosemide. Furosemide will be helping with your blood pressure and also to take out your swelling

The prescriber therefore used the exchange as an opportunity to provide information about the purpose of the medicines and the patient made very little contribution. Occasionally the review was used by the prescriber as an opportunity to check the patient was taking the medicines correctly:

Wendy (*Respiratory NPx*): And do you use a spacer?

Beverley (*Respiratory patient*): I have a spacer yes, because it irritates my throat otherwise

Wendy: So you use it with a spacer?

Beverley: Yes, not when I'm out of course, because I just carry it with me and

Wendy: [interrupts Beverley] Ok Seretide, the purple one, how often do you use that?

Beverley: Twice a day, two puffs

Wendy: Two puffs, and how do you use that? Do you use the spacer?

Beverley: Yeah

Wendy: Do you rinse your mouth after that one?

Beverley: Of course

Patient reports of the medicines they used were generally checked against the medicines listed in the patient's hospital notes or, if some time had elapsed since their last appointment, against the patient's repeat prescription list. The patients did not however always remember to bring their repeat prescription list with them despite being reminded in their appointment letter. After one encounter, Dawn, an oncology nurse prescriber, highlighted her concern when this happened and said that she was reluctant to prescribe without knowing exactly what medicines the patient was using as she '[doesn't] feel safe, prescribing without knowing exactly what they're on, but what can you do' (extract from field notes). Angela, a diabetes nurse prescriber, had to cease enquiring about one patient's use of medicines

during the encounter as neither he nor his wife could remember the medicines used. She agreed to ring the patient later when the list of repeat medicines was available. After the consultation she explained that, as he was a patient with several co-morbidities, it was very important that she obtained an accurate history about his medicines since these frequently changed between appointments (extract from field notes).

During the encounters there were few attempts to examine the patient's adherence to prescribed medicines, despite recommendations that adherence should be assessed in a non-judgemental manner in all situations where medicines are discussed (Nunes et al 2009, RPS 2013b). There appeared to be a level of diffidence amongst prescribers about dealing with situations in which patients were not taking their medicines appropriately or not following general advice about managing their condition, including lifestyle changes. The following extracts show how there was little exploration of the issue when patients discussed examples of not following the advice they had been given:

Steve (*Oncology patient*): I end up sitting down half way [on dog walk], well quarter of the way but otherwise I feel, I feel fine apart from getting these coughs and, but there again, I'm putting that down to smoking

Dawn (*Oncology NPx*): You're still smoking

Steve: Yeah, I'm sorry

Dawn: Okay (laughs) well we've nagged before so there's no point in nagging again

In the following example the prescriber made no reference to the patient's admission that he did not always follow advice and there was no attempt to explore this further, even though the prescriber had not met the patient before. The following extract is instead focused on the patient's generally good control of his condition:

Yvonne (*Diabetes NPx*): Of course because you carbohydrate count now as well. And do you find it sort of helps your control or is it more to do with lifestyle as in how you feel about your diabetes, or is it a bit of both?

Eric (*Type 1 Diabetes patient*): A bit of both actually. I'm a little bit, not renegade but you know I'm a little bit less pedantic about it to what I should be to be truthful to you. I do drink beer and things like that and try and modify it with, I keep getting lectures on how I should do it. Of course it's all very good but I do take it on board and try and do it as you should you know. But it's not easy; you've got a natural life to lead anyway

Yvonne: Absolutely, and what was your last Hba1c? Have you been told?

Patients living with renal conditions were the only group in which there was regular discussion of non-adherence to medicines, perhaps because the prescriber had access to blood results which were a clear indication of the extent to which patients were taking their phosphate-binding medicine. In the following extract one patient confirmed that he was taking the required medicine, lanthanum, when his medicines were reviewed early in the encounter:

Becky (*Renal NPx*): Lovely lanthanum, with meals?

John (*Renal patient*): Yes

Becky: And simvastatin at night?

John: Yeah

Later in the encounter the extent to which John was actually experiencing difficulties in taking the medication became apparent despite saying initially that he was taking it:

Becky: Good, let's just have a quick look at your blood tests [looks at screen]. Your bloods look good. Your phosphate....

John: Still up?

Becky: Still up

John: Has it come down at all?

Becky: I wouldn't say it's come down; actually it's on the way up. You know the tablet you're taking with your meals [lanthanum], are you taking that all the time?

John: Well I wouldn't say I'm taking it all the time no, no

Becky: You need to be a little bit careful with that one because you're only young and what this one does is when your phosphate is quite high and goes very high, what happens is it puts little calcium deposits down into your vessels and also into your joints, now it's a cumulative thing, it doesn't happen overnight, it happens over a number of years

The prescriber then provided a long explanation of the possible consequences for the patient of calcium deposits in the blood but, apart from suggesting that he 'pop a couple of tablets in your top' there was minimal further discussion of his medicines and no other strategies to enable their use were recommended.

One further patient was found to have difficulties with his use of lanthanum and also with controlling his fluid intake, an important lifestyle modification for those with renal disease. Again information was provided about the importance of good control of both aspects of his condition and their significance in relation to his forthcoming

transplant was emphasised. A good-natured and humorous debate occurred about the possibility of changing to a different phosphate binder:

Becky (*Renal NPx*): So, last time we changed you to...

Keith (*Renal patient*): [interrupts prescriber] Do you know what, I'm going to be honest with you, Becky. I do take them. I'm not going to say I don't take them because I do take them. My wife... You know what my wife's like, it's like living with Hitler but... I do take them but it's like.. I hate the sight of them. I can't stand the taste of them and they do physically make me heave

Becky: Well, what about going back onto the Sevelamer again?

Keith: Yeah, will you? Because they're tablets, I'll swallow 'em, I promise

Becky: Yeah, but we only changed them because you weren't taking those either

Keith: Yeah, I know, but I was very good... I'll be very good with them. If you change them back to the other ones, I'll promise you I'll take them. I really honestly...

Becky: But you've got to take three with each meal

Keith: I'll take four if I have to but I can't get them bloody things [lanthanum] down. I love the size of them, they're quite handy to have but they taste disgusting

Becky: Okay. So if I put you back to Sevelamer, you're going to try and take those ones?

Keith: Promise you, promise you, promise you

Becky: Okay, but I will check your phosphate next week (laughs)

In summary, the medicines used by patients were explored in every encounter. There was however limited consideration of the patient's experience of the medicines or of factors influencing their use. Discussion of possible non-adherence generally only occurred when there were blood results which indicated whether the medicines were being taken appropriately.

The provision of information about medicines however appeared to be a common way of enhancing patients' use of medicines and was identified as a sub-theme within the data. The approach adopted and the likely outcomes are explored further in section 5.3 below.

### 5.3 Information about medicines

Eight prescriptions were issued during the encounters. Most prescriptions were for further supplies of rescue medication or a change in inhaler or phosphate binder medication that the patient had used previously. Two prescriptions were issued which focused on additional medicines the patients required. These included one for Domperidone to treat a reflux-associated cough diagnosed by the prescriber and one for Carbocisteine to enable the patient's expectoration. Discussion regarding the new medicines prescribed was very variable. As suggested in previous literature (e.g. Latter et al 2005, Latter et al 2010), prescribers generally provided information about the way the medicines should be used but did not always provide information about possible side effects, limiting the patient's ability to be fully involved in decision-making. There was some negotiation regarding the prescription in that both prescribers suggested that the patients should try the new medicine for a month and that, if it did not help, there would be no need to continue with it:

Wendy (*Respiratory NPx*): ... I think it may be related to your tummy, given that you scored really highly on all those things there (indicates section on cough questionnaire) because this is a test that actually relates to people who have got acid reflux and that can trigger off cough. So something we can quite easily do is a trial, I can't say we can cure it –don't get too excited. We can look to treating that and, within a period of time of 2 to 3 weeks, we would know whether we're barking up the right tree and that's with drugs that aren't going to give you any nasty side effects. They're going to work on your tummy rather than anywhere else but certainly when you look at cough, then you look at depression and anxiety, there's studies looking at COPD and people with cough and cough scores much worse than COPD alone...it's just a symptom that is so irritating

Beverley (*Respiratory patient*): I always carry water and sugar free mints with me

Wendy [interrupts Beverley]: You just carry on with your tummy medicine as you are now for your acid but you take this in addition, 20mg, 2 tablets, 3 times a day before your meals

Beverley: Ok

Wendy: If you find that it's absolutely fab I would take that for the 4 weeks and at the end of 4 weeks I would go and see your GP and say fab, you can start reducing the dose then, he'll reduce it for you. Often you may get down to 10mg twice a day but hit it hard to start off and then we'll see where you go after that

Beverley: Thank you

Sometimes information about the likely benefits of a new medicine was stated so positively that, as indicated in the extract below, the patient could sometimes feel that they were required to try it:

Edward (*Respiratory NPx*): There are things that we could add in to help it.

Ursula (*Respiratory patient*): Not more tablets, is it?

Edward: There are... Well, no, this is not me saying that we need to give you something, this is really you helping to make the decision really and it's going to be your decision because I'm not saying that you must have it but I'm offering or we could try and do a month's trial of something and then we'll review it together to see whether it's something you'd like to continue with. Something to help to break down the secretions, you'd still need to bring them up but it would hopefully make it easier to bring them up. If we're thinking about your chest and your breathlessness a little bit as well, firstly, all of those secretions, the more secretions there are there, in that warm, wet environment, that's where bacteria like to breed and cause chest infections so the more wet secretions there are there, the more chance there is of you getting a chest infection

Ursula: What's that, the bronchiectasis do you mean?

Edward: Well, a little bit, yeah, absolutely. So the more secretions there are which is where bacteria like to live, the more likely you are to get a chest infection. So if we can bring all of that up, hopefully there's a reduced risk of you getting a chest infection

Ursula: So really I ought to try it then?

Edward: And also if you've got all of those secretions there clogging up your airways, if we can bring all of those up, hopefully it makes your airways a little bit clearer as well. So hopefully breathlessness is reduced

Ursula: It sounds as though I've got to try it then, doesn't it?

As with Beverley and Ursula, patients generally asked very few questions about any medicines prescribed although, for most patients in this study, the prescription was for a medicine they had used in the past. Very little written information was made available to support the verbal discussion of medicines despite its recommendation in policy guidance and evidence showing its value (Nunes et al 2009).

As discussed in chapter 3, the need for patients with a long-term condition to be fully informed about their condition so they can be active participants in their care has been a central theme within national and international health policy for many years (e.g. DoH 2004, DoH 2012a, Ellins & Coulter 2005, Coulter et al 2013) and it was evident that prescribers within the study emphasised their responsibility to ensure the patient was fully informed about both their condition and its

management. They provided very detailed information about many different aspects such as the nature and physiology of their condition, the importance of common tests and the action and expected effects of medicines used, together with a number of practical skills relevant to the management of different conditions such as their use of inhalers and the management of hypoglycaemic episodes.

The prescribers however tended to simply provide the information. There was no attempt made to assess patient understanding or to build on their existing levels of knowledge and understanding, suggesting an instructional mode rather than educational. Practical skills were often demonstrated on a verbal basis only with little opportunity for the patient to practise the skills. Patients usually adopted a passive role in this stage of the encounter, acknowledging the information only and not raising any questions:

Wendy (*Respiratory NPx*): I'll just remind you how, and since you've had a dose, we'll not give you another one. So we know that using a spacer is much more effective at getting the drug down in the lungs, even though you've got a good technique, a lot of it stays in the mouth and the throat

Anne (*Respiratory patient*): Yes

Wendy: If you use a spacer it goes right down in the airways and that's what makes a big difference to your breathing. Okay, so inhaler on that end, mouth on this end, in the mouth first, we'll give it a shake, in the mouth first, press down once and breathe in and out a couple of times [demonstrates with spacer and dummy inhaler, patient in observation capacity only]. If you take too deep a breath it can make a noise like a duck okay? So that's when you're breathing in too deeply and that's just getting the medicine here [indicates throat] rather going down to your lungs...

Anne: Right, so

Wendy: [interrupts Anne] so in the mouth, press down once, breathe in and out a couple of times, take it out, shake it and repeat it again, okay?

Anne: Yeah

Wendy: And that will actually I'm fairly sure, work better for you. This drug works immediately as well, within about five minutes and lasts a couple of hours. So if you know you're going to do something like, that's going to make you out of breath, if you use this beforehand rather than waiting until you're out of breath and you think, 'oh, I need my inhaler'. Because that's not a nice feeling to have and it makes people feel out of control sometimes, so if you use this beforehand that might actually stop that feeling from happening

Anne: Yes

This approach to informing the patient was used even with patients who had lived with their condition for a considerable period of time and may therefore already

know a great deal about their condition. In the extract below for example Diane had lived with Type 1 diabetes for 28 years. Her final comment suggests that she was already aware about the low risk of genetic transmission in Type 1 diabetes:

*Yvonne (Diabetes NPx): So what do you understand about, what is your type 1 diabetes?*

*Diane (Type 1 Diabetes patient): Well obviously type 1 is where your pancreas stops working so obviously you have to inject insulin into you*

*Yvonne: Because they do say that, they're still doing research now to find out causes. There's lots of research going on worldwide as you can imagine into what type 1 is or why certain people get it and others don't. What's quite interesting is that when they're looking at the genetic side of things in terms of whether it's something in the family or they often look at identical twins, they do studies on identical twins, because obviously identical twins are genetically the same essentially, and with type 1 diabetes for example if you had a set of identical twins if one developed type 1 diabetes the other one has got something like a 25-30% chance of developing it themselves. So obviously there is some genetic element there but with type 2 diabetes which is what generally older people get you know, where they're still producing some of their own insulin if you get the same identical twins if one develops type 2 the other one has a 99.9 I think or very high, certainly over 90% chance of developing it so clearly there's a lot of genetics in type 2*

*Diane: I mean I know when I was pregnant, people just presumed that my children would be born with it and I was just like, 'no it doesn't work like that'*

There were several other examples of situations in which patients felt the need to assert their knowledge and understanding, possibly because the instructional approach adopted by the prescribers did not allow patients' prior understanding to be taken into account and, in addition, there was little acknowledgement of the patients' moral and responsible approach to their condition. In the following scenario, the patient suggested he was already doing what the prescriber suggested in relation to his use of oxygen at home:

*Dawn (Oncology NPx): Stop on the landing and just give yourself a few minutes to recover...*

*Peter (Oncology patient): Just there, yeah, that's what I've been doing*

The following patient also points out that she already knew what the prescriber was saying when a new inhaler was prescribed that she had used in the past:

*Wendy (Respiratory NPx) [in relation to new inhaler]: If you turn it on the side at all you might not get the full dose. So hold it upright, hold both sides, you turn it one way and then the other. You must hear that click, if you don't hear the click there's no drug there. That click means your drug is ready for you to take it.*

*Anne (Respiratory patient): Yes, I remember from before*

In the following extract the patient used her knowledge and experience to directly challenge the prescriber:

Edward (*Respiratory NPx*): You know with the steroid that you need to take it

Tina (*Respiratory patient*) [interrupts Edward]: Six every day

Edward: ... six every day. We know with the steroid as well that it can give you some kind of tummy pains, a bit of indigestion

Tina: Yeah, yeah

Edward: And we tell people to take it first thing in the morning and we tell them to take it with food so that it lines their tummy

Tina: Sometimes on there, you saying that, Edward, it says take first thing in the morning with water, so before food, so I always do it that way. It says first thing with water, so I gather you don't have it with food, but you say you should have it with the food?

Edward: I find if we give it to people and they don't have something to eat with it, then they're much more likely to get tummy pains. I think it's sensible to take it with your breakfast

Tina: So even though the direction on the box would say with water before food...

Edward: [interrupts Tina] it's much better with breakfast

It therefore appears that the information offered by prescribers may already be known to patients, thus diminishing its value. There was also some suggestion that, for a small number of patients, the information or advice offered was resisted or even rejected. The following patient was reluctant to accept the offer of advice from other members of the specialist team regarding his fluctuating blood glucose levels at the weekend as he felt he had already received advice about managing his blood glucose levels. He also seemed to suggest that his behaviour was not a problem in the way implied by the prescriber:

Yvonne (*Diabetes NPx*):...maybe we can either incorporate doing a review, a revisit with the carbohydrate counting then and go through the meter or again we could actually get you a slot with the dietitian to go through it

Eric (*Type 1 diabetes patient*): I've seen one of them; I saw one about 3 weeks ago. Yea they put me on to one because, erm, weekends you know where I tend to, I don't go barmy but I'll have a few more beers than one... (2 secs.). Alright not a lot to be honest perhaps 3 or 4 pints at the most but erm and it was always at weekends that I started to flop around with the blood sugar and so erm I went to see the dietitian and she gave me couple of good points which I thought were reasonable to do. But no, (2 secs) you know dieticians are ok and they're very good but I'm not too bothered about seeing one

Yvonne: Ok that's fair enough, so in terms of the pointers that she gave you with regards to drinking alcohol and your diabetes etc. I mean was it anything different than what you'd sort of learnt on the course, on the IDAC course?

Eric: Not really

In summary, this section suggests that informing patients about their medicines is a key focus within the prescriber's role. There was however evidence that an instructional approach was adopted in which detailed information was provided but there was little consideration of patients' existing knowledge. This situation led to many patients finding it necessary to assert their expertise and could lead to them resisting or even rejecting the advice that was offered.

The following section examines the contrasting biomedical and lifeworld discourses that were apparent within the encounter, suggesting that the resulting asymmetry is likely to have a similar adverse influence on the patient's ability to engage in the encounter and, in turn, their use of medicines.

#### **5.4. Interactional Asymmetry**

An explicitly medical agenda, led by the prescriber was a characteristic found in all of the encounters, even in the context of a warm and on-going relationship. As discussed in chapter 3, this approach is described by Mishler (1984) as the use of a biomedical discourse by the practitioner, described as the 'Voice of Medicine', which serves to disrupt meaning and constrain the patient's use of the 'Voice of the Lifeworld', resulting in decontextualized information and asymmetry within the encounter. A similar pattern of interaction was evident within the encounters observed in the present study and Mishler's descriptors (Barry et al 2001, Mishler 1984) are used to explore the findings. It should be noted however that their use does not imply acceptance of Mishler's explanatory framework which, as previously discussed, was based on the social capital held by the medical profession. The detailed analysis of verbal interaction used by Mishler (1984) was also not undertaken in the current study although the interactional patterns described below such as interruptions and blocking the patient's response were very evident within the encounter and within the recorded interaction.

In a similar pattern to that demonstrated within the medical encounters observed by Mishler (1984) and other authors (Barry et al 2001, Heritage & Maynard 2006a) prescribers generally controlled the agenda within the encounter, initiating new topics for discussion through raising questions, frequently interrupting patient

accounts to do so (Heritage & Maynard 2006a, Mishler 1984). Patients rarely asked questions or initiated new topics.

Prescribers usually led the discussion within the encounter through the questions they raised. Although there were a few examples of topic initiation by patients, this usually occurred due to the prescriber asking whether they had any questions:

Yvonne (*Diabetes NPx*): Excellent, so I feel as if I've talked to you, have you got anything that you wanted to ask?

Eric (*Type 1 diabetes patient*): Not really. I don't know anything about this, what do they call it NPH [a new type of insulin that the Consultant had suggested he might use]. I don't know anything about it at all apart from I don't know whether I was on it. They took me off it once before but I don't remember doing 2 lots a day so I don't know whether it was a different one they put me on or what

Yvonne: Well the Humulin I that you said you were on before, as I say that's essentially the same insulin

Eric: I'm sorry I don't know whether it is Humulin I, I'm going way back now, because Humulin, they brought out Humalog which I went on and at the same time they brought out Humulin which was an evening, a night time one.

*[Yvonne then offered a long explanation of the different sorts of insulin available including their length of action, accompanied by diagrams illustrating their impact on the patient's blood glucose levels. Eric did not participate in this discussion]*

In contrast to Mishler's (1984) findings however, interactions were however conducted in an informal manner with each party referring to each other by their first name within the majority of the encounters. There was evidence of use a lifeworld discourse by prescribers, particularly within the opening and closing phases of the encounter, which were frequently accompanied by queries about a patient's interests or the well-being of a family member:

Edward (*Respiratory NPx*): Come in Tina. It's good to see you. Are you still doing your bridge is it, in the evenings?

Tina (*Respiratory patient*): I haven't...it's crib and it starts three weeks today

Edward: I don't know the difference between bridge and crib, is it...

*[Patient explains the difference]*

Edward: Right. So thank you for coming this afternoon. You've just had your spirometry...

Prescribers used a mixture of medical and lay language during the encounter, although it is difficult to draw any conclusions about the pattern of its use and significance due to the small sample. It appeared that prescribers were more likely

to use lay language when they were uncertain about the patient's level of understanding of the management of their condition. For example, with patients they knew well, prescribers would use a mixture of medical and lifeworld discourse. They however used lay language almost exclusively during their encounters with new patients. In the extract below Nina is a patient who has lived with bronchiectasis for many years and has known the prescriber for ten years. She has recently experienced an infective exacerbation of her condition:

Claire (*Bronchiectasis NPx*): So the steroids should work within 48 hours, hopefully you'll see the cough diminish

Nina (*long-term bronchiectasis patient*): Hurray! (Both laugh)

Claire: And you may find that you may produce a little bit more sputum because it's trapped down there (indicates base of lungs), 'cause although it's not reflected in your lung function you can hear... your airways are really squeaky, they're not crackly like an infection, they're just squeaky as if there's airway inflammation, so hopefully settle that down, you may just find that you produce a bit more

Nina: Okay, yeah

Claire: You've got the reserve Co-trimoxazole for next time. What we've got to be careful is that this doesn't happen every two months 'cause obviously that's not being effective on your lungs. So the next time this happens, if it again is as bad as this time, I may say to you, 'IV antibiotics to completely reduce the load...'

In contrast Beverley is a patient with COPD, again of several years' standing, but who has recently been referred to the hospital clinic so is unknown to the prescriber:

Wendy (*Respiratory NPx*): So you've got existing lung disease which is progressing slowly, we're just looking at ways that we might be able to help you with it. So the first thing I've got to do today is do another bit of a history. Ok?

Beverley (*new respiratory patient*): Of course

Wendy: Then we'll look at the things we might be able to suggest that might make things a bit easier for you. Right- [checks notes on computer screen]

Whilst prescribers tended to use a form of language that could be understood by the patient they still ensured that the technical, rational message within medical discourse was communicated to the patient. Prescribers' communication could therefore be classified as the Voice of Medicine although it was not characterised by the medical jargon that is typical of this voice. One patient asked whether the organisation of his dialysis sessions could be changed for the forthcoming half-term week since, as a single parent, he had been unable to arrange child care for his

children who were staying with him that week. Whilst his request was accommodated it was accompanied by a lengthy discussion of the medical reasons why his dialysis sessions should not occur less frequently and it was made clear that he must arrange child care for the next school holiday, thus ensuring the medical agenda remained dominant:

Ivan (*Renal patient*): Next week I've got my kids Wednesday, Thursday, Friday and I haven't got anyone else who can look after them so I need to see if there is a possibility....[to reduce the number of dialysis sessions] So there's not a lot I can do about it

Becky (*Renal NPx*): What I suggest we do is, the dialysis sister asked me if you could actually take it, skip the Wednesday. Now I did have a look at all your blood tests yesterday to see whether that was possible, because I thought actually that it may be possible that you could reduce your time. But when I had a look at the quality of dialysis that you're having it was a little bit on the low side... *[account followed of the different indicators of renal function in Ivan's blood results]*. We're actually not giving you enough dialysis to keep you as well as you could be...what that does mean is we do have to give you a little bit more dialysis than we're giving you and the only way that we can do that is to actually increase your time...That's fine just this week alone, just this week that will probably be ok to just sort of [spend less time on dialysis] but it's not something you can do regularly...for the summer holidays you still, you still will need to do those 3 days a week...

There were many examples where the patient's use of lifeworld discourse was interrupted by the prescriber, who interjected with a statement expressed in the medical voice. This strategy was used particularly when patients introduced statements presenting themselves as moral and responsible, making every effort to ensure they managed their condition effectively and this sub-theme is explored below.

#### 5.4.1 Moral responsibility

Whilst patients frequently tried to demonstrate that they were managing their condition effectively there was generally little or no acknowledgement from the prescriber of the patient's responsible position. The statement below involved the prescriber interrupting the patient:

Frances (*Type 2 Diabetes patient*): ....so I kind of allotted myself so much each day because otherwise you're reading it [information about diabetes] and it doesn't go in. So I educated myself a bit each day and I looked on the computer and it wasn't actually until I came here [hospital clinic] that I learnt a lot more about it from the ladies here. Obviously I looked it up because you like to know what's going on don't you and especially as my little dog is now diabetic so he's come out in sympathy with me...

Yvonne (*Diabetes NPx*) [interrupts Frances]: So in terms of the relationship between how active you are and what your blood sugars are doing....

Interruptions also occurred when the patient tried to discuss ways in which they carried out their normal everyday activities, thus again demonstrating a moral and responsible approach. The following patient for example tried to show how she was still working on her allotment and maintaining her independence:

Mary (*Bronchiectasis patient*): I like gardening, you know. [Name of husband] will do anything if I ask, you know, but I like to achieve myself...And he'll come to the start of the allotment and he'll say, "Come on, you're purple, in the house and cool down, we'll have a drink," you know, and whereas I don't feel it, yes I might be feeling hot, but because you are doing something, you know, and it is warm and...

Claire (*Bronchiectasis NPx*) [talks over Mary's account]: So with that combination [of inhalers], doing as you're doing, is the chest tightness less as well?

There was some evidence that prescribers could find it challenging when patients asserted their moral position. One prescriber, (Becky, Renal NPx) experienced minimal response from a patient to any of her attempts to introduce lifeworld discourse within the encounter. Fieldwork notes show that Becky reported, prior to the encounter, that she always found her engagement with the patient (Linda) difficult. Linda had lived with renal disease for many years and appeared to be reluctant to accept the advice offered by Becky or anyone within the renal team since she believed she was managing her condition effectively. The team believed that Linda's kidney function was at a level where she should be receiving dialysis to correct her blood acidity but she had firmly rejected this treatment, preferring to take a solution of sodium bicarbonate by mouth on a daily basis. Becky explained that it was difficult to be certain how much sodium bicarbonate Linda was ingesting via this route. Field notes show that the actual encounter between Linda and Becky appeared very formal and rather tense with little development of answers or commentary by either party:

Becky (*Renal NPx*): So we're still just sort of keeping an eye on you and keeping you, I mean I'm sure you will tell us when you don't feel well

Linda (*Renal patient*): Oh I will, I'm sure I will

Becky: The difficult thing is that I mean for your size and height most people sort of at this level would be starting to feel a little bit symptomatic of uraemia and I think what it is, is because you've been at this level for such a long time now, I mean, we're talking, we're really at the same level as you were in 2007 so we haven't really changed very much

Linda: No

Becky: And probably, but I think over the years you've actually got used to feeling like how you're feeling now and I think it's normal for you to feel like that and that's the difficult thing. You know that it's possible that if your urea was a little bit lower you may feel better but I think you've got used to how you're feeling and you feel well and I mean you know the symptoms that we've always talked about

Linda: Yeah, yeah

Becky also introduced a comment about Anne's blouse at the beginning of the physical examination which may have been an attempt to make the encounter less formal, although it did not enable any further communication with the patient:

Becky (*Renal NPx*): I like your pink top, that's lovely, it really looks nice

Linda (*Renal patient*): You don't know what to wear do you, summer clothes

Becky: You've got brown legs, where have you been

Linda: Well I've got an allotment so

Becky [interrupts Linda]: Lovely, let's have a listen....

A further prescriber (Wendy, Diabetes NPx) appeared to struggle to interrupt the lifeworld discourse of one of her patients (George, Type 2 diabetes) in which he suggested he was managing his condition and his lifestyle appropriately. As shown in the sample description in Chapter 4, George firmly believed that he had Type 1 diabetes despite all aspects of his history, age of presentation, etc. suggesting that he had Type 2 diabetes. All of the diabetes team had tried to educate George about his condition but with little evidence of any change in his perception of its nature (extract from field notes). During the encounter it also emerged that George was not following conventional advice about testing his blood glucose prior to meals and then adjusting his insulin dose according to the glucose level and the amount of carbohydrate within the meal.

Despite many attempts by Wendy to interject the correct information, using the Voice of Medicine within questions, the patient did not either respond to the query or expanded his answer to cover his lifeworld issues, presenting himself as managing his condition responsibly. This meant that the prescriber found it difficult to obtain the information she was seeking. It was also not possible to know whether the message about the correct management was received by the patient. The issue of the timing of George's blood test and insulin injection was raised at many points during the encounter but George appeared to remain convinced that his management was appropriate. During the interview with George three weeks after the encounter it was apparent that he was still continuing to test his blood glucose

and take his insulin approximately two hours following his meal, rather than before the meal as recommended. The following extract is an example of the prescriber's struggle to introduce the Voice of Medicine:

Wendy (*Diabetes NPx*): So you're talking about 20 [high blood glucose level], which is like an hour after you've eaten the food?

George (*Type 2 diabetes patient*): Yoghurt would spike very, very quickly, cos the sugar just hits your system

Wendy: Yeah. Well, see again, George well, yoghurt does obviously eventually hit your system, yeah, and obviously I do appreciate that for some people, certain carbs [carbohydrates] are absorbed more quickly. Even though we do have like glycaemic index lists and what have you, so can I just clarify this, so what you're saying is that you eat whatever it is you're gonna have, you have your meal, and then an hour later you...

George: A normal regime, right, a normal regime, I don't, my partner kicks my arse over breakfast, I'll only have a couple of slices of toast or a banana at breakfast

Wendy: That's fine, that's OK

George: Right, lunch is normally now...

Wendy: [interrupts George] Yeah, but so, for breakfast then, but what I'm trying to get, what I'm trying to sort of get clear in my mind is what's your routine? So, you would do a blood sugar, before a meal you'd do a blood sugar...

George: Yeah. I wake up...

Wendy: ...and you'd eat your meal...

George: I wake up, I find out what, the first thing you do, it's routine, the first, "Where am I?" for the day, right, that's the first thing you do, you know. Go in the shower, brush your teeth, check your bloods, right. So, I'll find all that out, and I'll be anywhere between normally 6 and 9, I'd be about that, somewhere in that range. So if I'm 9, I'd like to be about 5.5/6, so I'll just, I know where I'll be, so I'll just knock that down

Wendy: Without any food...?

George then spoke at length about all aspects of his daily routine and management of his blood glucose measurement and insulin levels. The prescriber tried to interrupt at more than one point, particularly when he disclosed ways in which his management of his condition was not as recommended. She was able to raise an important question about the medical management of his condition only after some time:

Wendy: So you... right, OK. I do understand what you're saying, George, yeah. It's... I think my concern, really, is the fact that, you know, potentially, I mean, do you have hypos [episodes of very low blood glucose]?

George: sometimes but I've got that kicked into touch [explanation of how his staff knew what to do if he experienced an episode of low blood glucose and that the glucose drink in the staff room was for his use alone]

After this exchange there was little further exploration of George's approach to the management of his meal-time insulin dose and the discussion moved on to consider the amount of exercise taken.

In summary, this section has shown that patient-nurse prescriber encounters have an apparent asymmetry since the prescriber dominated the agenda and there were few examples of topic initiation by patients. Whilst prescribers could use the Voice of the Lifeworld (Mishler 1984) within the encounter they frequently interrupted the patient's use of a lifeworld discourse to ensure the medical agenda remained dominant. This strategy was used particularly when patients expressed their responsible and moral approach to managing their condition. Maintenance of the medical agenda was however more difficult with certain patients suggesting that the operation of asymmetry is more subtle than in doctor-patient encounters. Further detailed research in this area is required to fully explicate the consequences of the nature of the encounter, including the use of medical and lifeworld discourses, for patients' management of their condition.

## 5.5 Summary and conclusions

This chapter has examined the nature and structure of the patient-nurse prescriber encounter, including the discussion that occurred about the patients' medicines use and discourses that were evident.

Prescribers generally demonstrated a rather superficial review of the patients' use of medicines and showed limited consideration of the potential for patients not using their medicines as prescribed. The main strategy used to enhance patients' management of their condition, including the use of medicines, appeared to be the provision of information which was frequently detailed and focused on the nature of the patient's condition, together with instruction about the function of medicines and how they should be taken. There appeared to be a limited use of any educational approaches within such discussions.

Encounters took place in the context of a warm and valued relationship which was frequently long-term. The nature of the encounter generally followed that found within doctor-patient encounters in that it involved a question-answer format in

which the questions were asked by the prescriber and responded to by the patient, suggesting an asymmetry in the relationship between patients and nurse prescribers. The asymmetry was however more subtle since, although they were usually able to manage the encounter in way that ensured the medical agenda remained dominant prescribers found it difficult to impose the agenda with certain patients. Prescribers interrupted or did not acknowledge patients' use of the voice of the lifeworld particularly when patients presented themselves as moral and responsible patients. This presentation emerged as a priority for patients within the analysis of interview data and the implications of its apparent neglect within the encounter will be explored further in chapter 7.

## CHAPTER 6: FINDINGS FROM PATIENT AND PRESCRIBER INTERVIEWS

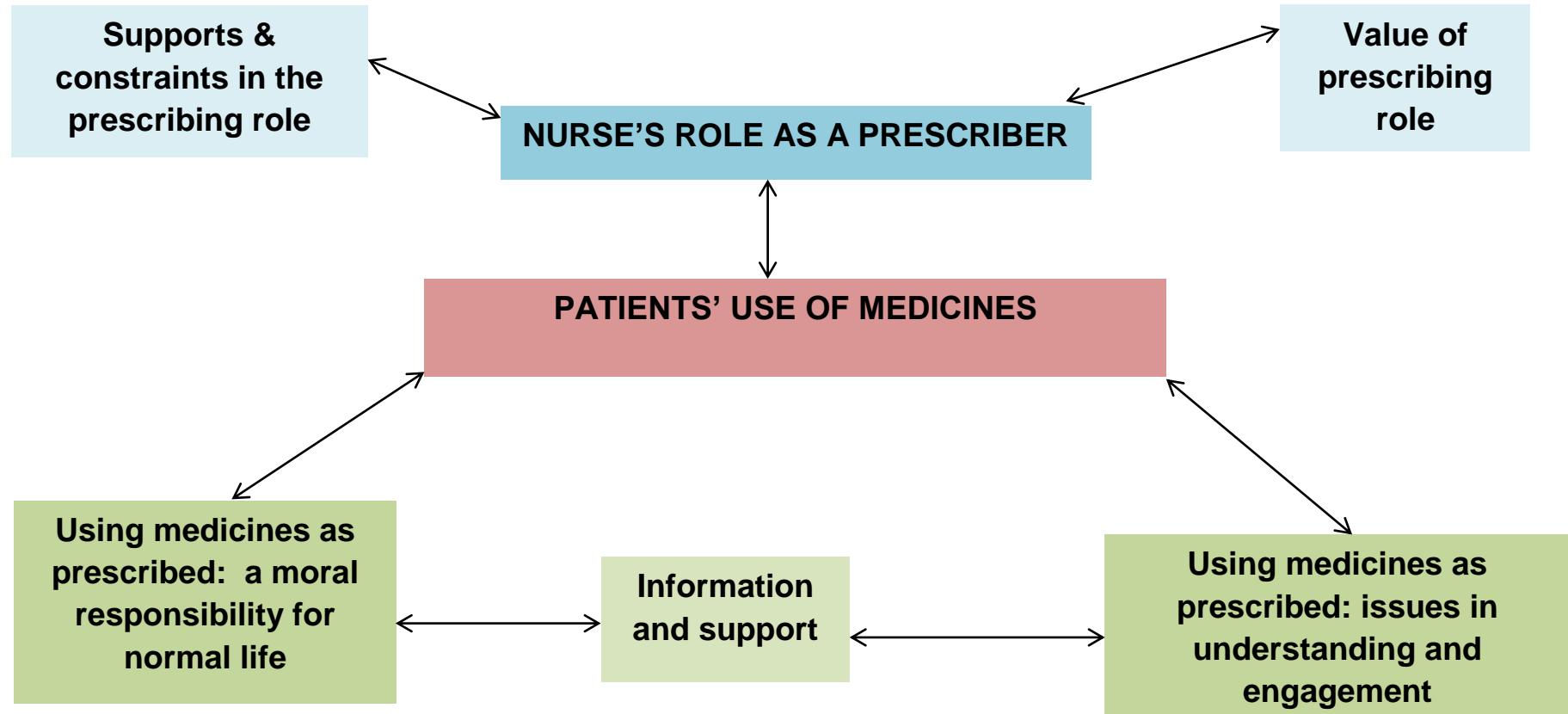
This chapter is focused on the findings obtained from the analysis of the interviews undertaken with both patients and nurse prescribers. The analysis focused on patient and prescriber views of issues that were integral to the research aims identified for the study including any supports and constraints within the prescribers' role that might influence their ability to work with patients and factors that influence patients' use of medicines. The analysis was also sensitive to any socio-cultural assumptions and discourses underpinning the matters discussed within the interviews. Analysis therefore involved the identification of *a priori* and emergent themes which, as previously argued (see section 3.6) was believed to be important in the investigation of an area in which there is limited empirical evidence.

Two main themes were identified, the nurse's role as a prescriber and patients' use of medicines. Sub-themes were identified for each of the main themes, including the value of the prescribing role and constraints experienced within it, together with sub-themes describing patients' use of prescribed medicines as either an issue of a moral responsibility to accept and manage their condition or one of understanding and engagement. A further sub-theme, information and support, was also identified. The thematic map developed from the analysis is presented in figure 6.1 below.

The themes identified showed that the nurse prescriber role was highly valued by both patients and prescribers. There was however evidence of a disparity in the discourses used by each group of participants with patients using a discourse of morality and responsibility in relation to their management of their condition and their use of medicines. Any examples of medicines not being used as prescribed were explained in terms of the impact they had on the patient's everyday responsibilities. In contrast prescribers suggested that many patients were not able to use medicines appropriately, an issue they believed to be one of a lack of understanding and engagement on the part of the patient. It was evident that many prescribers experienced a sense of frustration with patients' behaviour.

It is suggested that this disparity in discourses may contribute to resistance on the part of patients to follow any advice offered by the prescriber. Whilst patients felt it was important to manage their condition responsibly, their need to live their everyday life responsibly was imperative. Such arguments will be developed in chapter 7.

Figure 6:1 Thematic analysis of interview data: Final thematic map



## 6.1 Nurse's role as a prescriber

There was extensive discussion within both patient and prescriber interviews about the nurse's role as a prescriber. A number of issues were explored within the discussion including the nature of each prescriber's role and the associated professional responsibilities. One sub-theme focused on the value of the role perceived by patients and nurses. Different aspects of the role were valued with patients identifying quality of their relationship with the prescriber and nurses describing instrumental, job-focused benefits (Section 6.1.1). A further sub-theme was also identified in relation to the supports and constraints experienced by the prescribers in relation to supporting patients with their use of medicines (Section 6.1.2). An overview is first provided of the nature of the nurse prescribers' roles to provide the context for the discussion.

All of the nurse prescriber participants were highly experienced within their specialist field. They had a wide range of higher education qualifications relevant to their role including for one nurse prescriber, a master's level module focused on the 'psychology of compliance' (sic) (*Wendy, Respiratory Nurse Prescriber*) (*NPx*). As identified within several previous studies (e.g. Carey et al 2010b, Latter et al 2011), all nurse participants prescribed very regularly, with one nurse describing this activity as one that was carried out 'all day, every day' (*Edward, Respiratory NPx*). The participants prescribed a range of drugs relevant to their specialist role. Several nurses prescribed within a personal formulary agreed with their employers, however three nurses reported that they did not have a specific formulary but instead used evidence based guidelines and the local antimicrobial policy to guide practice.

Whilst there were no specific questions about their responsibilities as a prescriber, all of the prescribers raised this issue, demonstrating their understanding of the Department of Health and professional body guidance in this area (DoH 2006, NMC, 2006) and showing a safe and cautious approach in practice. The need to work within the limits of their competency was emphasised by all of the nurse participants:

I limited myself to those [drugs for diabetes] purely and simply because I felt that, well I just, it was about competency wasn't it, and so I limited myself, but of course I do, I do actually need to review my list now because there are other drugs (*Yvonne, Diabetes NPx*)

The participant then went on to describe the activities she was undertaking to develop her competency in areas such as the prescribing of statins and drugs for

high blood pressure, conditions that are often experienced by patients with diabetes. Developing their role through the prescription of a wider range of drugs was mentioned by two other participants and it was evident that it was a step that had been carefully considered by the prescribers concerned:

I'm thinking now about prescribing for end of life, that's quite a big step for me.... I've gone out with the [cancer] palliative care team, have looked at palliative care prescribing, we use quite a lot of anxiolytics, we use morphine and actually getting to that point is a bit scary... we've decided we'll work together on it and work on lorazepam as our first drug, maybe a year later we'll move on ... [referring to plans with a prescribing colleague in the same team] (*Wendy, Respiratory NPx*)

Six of the prescribers discussed the importance of their engagement with on-going professional development which led to one participant establishing and co-ordinating a prescribing clinical supervision group. One prescriber, who had undertaken a study visit to the United States, discussed his concern at seeing the widespread use there of drug samples provided by pharmaceutical representatives and how these were dispensed to the patient by the prescribing practitioner. Such a situation is not allowed within the United Kingdom where prescribers are not normally allowed to dispense any medicine they have prescribed and where there are clear expectations of an ethical and responsible approach to working with pharmaceutical company representatives (DoH 2006a, NMC 2006). The prescriber stressed his preference for this approach:

[O]bviously that's something that wouldn't happen here at all...I was given these twenty tablets [by a representative] but I've just got them sitting here because I wouldn't be happy giving them, sort of taking that responsibility (*Edward, Respiratory NPx*)

Three nurse prescribers also referred to the cautious approach they adopted within their prescribing role, demonstrating a reluctance to prescribe unless they were satisfied that it was safe and appropriate to do so:

I've worked as a medical ward sister for a number of years, district nurse for a number of years and you know that you could prescribe but there's always the question mark about whether or not it's within your field of specialist expertise and I usually err on the side of caution (*Dawn, Oncology NPx*)

Two other prescribers referred to the caution they felt was important both in relation to drugs in general and the drugs they were approved to prescribe by their employer:

I'm so anti-drug to be honest...I try to do everything without drugs...each drug has to be given its due respect and not adding in drugs when you haven't checked all the other things are in order (*Wendy, Respiratory NPx*)

You can go to the appropriate people for that to be okayed [revision to drugs list] and I think that's important... I like that it's closely monitored in the hospital, I wouldn't want to be able to prescribe everything like practice nurses (*Angela, Diabetes NPx*)

#### 6.1.1 Value of nurse prescribing role

Nurses valued their prescribing role highly, emphasising similar characteristics to those found in earlier studies. Thus, for the majority of prescribers the value was expressed in terms of the way it enhanced their work such as its convenience in not having to search for a doctor to write a prescription:

I can manage my patients without having a clinician nearby which then also allows me to make the decisions I want to make at that time, which then means that you're not running round chasing after a doctor (*Claire, Bronchiectasis NPx*)

One prescriber highlighted that prescribing also saved time since she did not have to explain the relevant medicines to the doctor:

Yes and what's nice about it is you haven't got that running around to doctors and then you're trying to explain why you want this drug, this sort of thing, they know the patient but they don't know up to date treatments, sort of, you know, all this [takes time] (*Yvonne, Diabetes NPx*)

Two nurse prescribers referred to the ability to provide a whole package of care to the patient, although this was usually again valued because of its convenience for the nurse:

I can complete an entire process of care it makes things much easier for me (*Edward, Respiratory NPx*)

Whilst there was no specific question about their perceptions of the nurse prescriber, most patients volunteered their views. In contrast to the work-focused views of the prescribers, nearly all patients described the value of the nurse prescribing role in terms of the relationship they had with the prescriber and their appreciation of his/her approach:

I think she's friendly and very pleasant to talk to but she's, she's assertive in a, in a gentle way if you know what I mean. It's hard to describe but you, she doesn't say you can't do that, you shouldn't be doing that. She, she eases you into agreeing (*Eric, Type 1 Diabetes patient*)

You know what you should expect and what you will get and she's been right. So from this point we've got, you know, you ask her something and she's sorted it out...you don't feel like you're a number (*Peter, Oncology patient*)

It's a really good relationship and I know I can always ask questions (*Nina, Bronchiectasis patient*)

No they really are extremely professional, but human. Does that make sense? (*Frances, Type 2 Diabetes patient*)

There were no explicitly negative views expressed by patients about the nurse prescriber. The only comment that was less than fully complementary was expressed by Keith, one of the renal patients, who reported that he found:

Becky's quite good, yeah. I think you know, we all have our moments, I'm sure Becky has her moments as well (2 seconds pause) it's a hard enough job that she does (*Keith, Renal patient*)

Keith had however been experiencing difficulties with low blood pressure following his last three episodes of dialysis and it is difficult to know the extent to which this influenced his response. As can be seen in the statement above he was also very careful to qualify his response by referring to the challenges in the nurse prescribing role. Whilst attempts were made to develop Keith's discussion of his views of the prescriber, he instead moved on to discuss the help she had provided in enabling him to understand his condition better.

Patients therefore valued several aspects of their relationship with the prescriber, including his/her approachability and the individualised care provided, which mirrors the findings found in previous studies of nurse prescribing (Carey et al 2014, Courtenay et al 2009b, Latter & Courtenay 2004, Latter et al 2007, Latter et al 2011, Stenner et al 2011).

#### 6.1.2 Supports and constraints in the prescribing role

Prescribers were asked whether there were any factors which influenced their ability to support patients fully in relation to their use of medicines. Whilst two prescribers reported a supportive senior management team that facilitated their practice most prescribers discussed the constraints evident in their role. A lack of time or staff resources was an issue for most prescribers, preventing them from working with the patient in an optimal way:

I can sort of instigate something and I suppose because, again because of lack of time, sometimes I feel that I don't always have the time to sort of investigate deeply (*Yvonne, Diabetes NPx*)

Well I mean it's just time constraints really isn't it? Management of time... it would be really lovely if you could spend a long, long time with each one in the clinic...if you could spend time every day going through drug reviews but it's impossible to do (*Becky, Renal NPx*)

The two nurses who felt they were fully supported by their senior management however reported that they experienced no time constraints:

I have long enough consultations. I guess I'm lucky because GPs don't or primary care [nurses] don't have that and I think I have as much time as I want (*Claire, Bronchiectasis NPx*)

Time isn't a problem, not for me (*Dawn, Oncology NPx*)

Dawn (Oncology NPx) developed her statement to suggest that the only time pressures she experienced was the next patient having to wait slightly longer although she believed that the majority of patients were happy with this situation if they felt they 'would have all the time they need too' [extract from field notes]. Becky (Renal NPx) however reported that she was concerned at times as she felt that her consultations were longer than those of the renal doctors. She rationalised that this situation was due to their significant experience which allowed them to identify important issues in the patient's history more quickly whilst, as 'it's still very new to me' she had to consider every reported symptom fully (*Becky, Renal NPx*) [extract from field notes].

Two nurse prescribers working in the fields of respiratory and diabetes medicine talked about the need for additional psychological support for patients in terms of the depression that frequently occurred in their patients. Mental health problems, particularly depression and anxiety, are generally around three times more likely in those living with a long-term condition such as diabetes or COPD (Naylor et al 2012) and, in informal discussion prior to the interview, the respiratory nurse prescriber noted that her clinic was often referred to as 'the citalopram clinic 'cause so many patients are on antidepressants' *Wendy, Respiratory NPx* [extract from field notes].

Four nurse prescribers, all hospital-based, referred to the challenges of prescribing across the interface with primary care. Such challenges were often an issue of cost when the nurses prescribed a medicine which the GP was reluctant to prescribe in primary care. This issue usually applied to relatively costly medicines such as phosphate binder medicines used in renal services or some of the newer medicines for the treatment of Type 2 diabetes.

Expensive drugs, I mean we pay for, you know, the renal unit pays obviously for all the erythropoietin and all the expensive things, but a lot of GPs don't prescribe phosphate binders and things like calcium resonium, they're all quite expensive things (*Becky, Renal NPx*)

Two hospital-based prescribers spoke positively about the ability to have contact with the patient in their own home as this provided them with additional information

about the issues influencing a patient's use of medicines. One prescriber was able to undertake visits to the patient's home:

If we've got patients that we have particular concerns about, my role allows me to say, 'maybe you'd be better having a home visit'...it's not done in every Trust but we've always prioritised it here... Actually patients I've worked with have been really interesting to work with and it has helped...on our home visit sheet that we have we don't just do respiratory drugs, we do all drugs...so we actually look at the compliance associated with each drug and I feed that back to the GP or consultant because we prioritise that as high (*Wendy, Respiratory NPx*)

A second prescriber was able to understand the patient's home circumstances through the work of a team based in the community:

We're lucky now we've got a community specialist team and of course we do liaise a lot with them or we sometimes do joint visits if needs be so... I feel as if it is good (*Yvonne, Diabetes NPx*)

Yvonne then went on to talk about a difficult situation she had encountered with an elderly patient who was taking insulin to control his diabetes. Whilst the patient had successfully managed his condition for 50 years, the onset of dementia meant that he would frequently take his insulin for a second time as he had forgotten about the first dose he had taken. This led to recurrent episodes of very low blood sugar, requiring hospital admission. Close collaboration with the community diabetes team had meant that appropriate services could be organised enabling the patient to live safely at home:

We had the opportunity to have a case conference, for want of a better term with him, with obviously the gentleman, his son, daughter-in-law, all of us, the community DSN [diabetes specialist nurse] and that's where we came to this agreement with him... a process to actually keep him safe but keep him at home (*Yvonne, Diabetes NPx*)

For most of the hospital-based nurse prescribers however the only contact they had with the patient's life in the community was via their communication with the GP following the hospital appointment. Two of the nurses highlighted the particular difficulties they found in communicating effectively with GP's about medicines which they had initiated. This could lead to patients receiving drugs for an inappropriate period of time, or potentially more seriously, receiving drugs which could be harmful:

[It's difficult] often you can find, when they bring them in [medicines] you, you find they're on like five, six pills that they shouldn't actually be on (*Becky, Renal NPx*)

I mean sometimes you prescribe a tablet expecting the patient to carry on taking it and they don't and so they [the GPs] just stop it and patients that are on drugs that they should just take for a course like Fluconazole or Nystatin they still carry on, the GP keeps prescribing it ....I had a lady a couple of weeks ago... and she said 'Oh the GP thought I should stay on one 2mg tablet [of Dexamethasone]'... they do get lots of side effects from that and that actually begins to detract from their quality of life rather than adding to it.....you know that's quite a big dose (*Dawn, Oncology NPx*)

Although both prescribers were keen not to attribute any blame for the situation, such difficulties were felt to be caused by the GP perhaps not receiving or reading the letter sent by the nurse prescriber after the patient's appointment. To address this issue one nurse had started highlighting any changes to the patient's prescription in letters to the GP and ringing the surgery when necessary:

I've lately been writing an asterisk on the bottom of my clinic letters and I've been writing 'please could you amend this person's repeat prescription?' So I've actually started to write that much more clearly in bold.....if the following month the patient is still not on that pill I've actually rung the surgery.....but I don't know, it's difficult isn't it for GPs? (Laughs)... They probably get millions of letters (*Becky, Renal NPx*)

In summary, this section has focused on the nature and perceived value of the nurse prescribing role and presents findings which generally support those identified within the literature. It has also examined the supports and constraints that prescribers may experience in carrying out their work. Whilst this analysis is based on a small sample of nurse prescribers it is interesting to note that there appear to be issues in the funding of medicines and other products that hospital nurses prescribe for patients' use in primary care settings, despite a national requirement for health economy/area prescribing committees which are responsible for managing the use of medicines, including funding, across care interfaces (Picton & Morris 2008). There also appear to be challenges for nurse prescribers in communicating their prescribing decisions to the patient's general practitioner. Both issues have the potential to adversely affect the patients' use of medicines and require further exploration.

The next section considers issues identified in relation to the patients' use of medicines.

## 6.2 Patients' use of medicines

The medicines used by patients and the factors influencing their use were a significant focus within both patient and prescriber interviews. This section first

examines the use of medicines by patients and the factors influencing their use that were agreed by both patients and prescribers. These included the number of medicines patients are required to take, different practical strategies that could be used to enhance a patient's use of multiple medicines and the issues raised by the use of generic rather than branded medicines. It then explores the distinct sub-themes which demonstrate differences in the views and discourses used by patients and nurse prescribers to explain and account for patients' use of medicines.

Patients always discussed their medicines' use in the context of their everyday life and demonstrated their commitment to ensuring that life carried on as normal. Most patients expressed this in ways that demonstrated a perceived sense of moral responsibility to ensure this. In contrast, nurse prescribers explained patients' difficulties in using medicines as an issue of a lack of knowledge or a lack of patient engagement with their treatment. Sources of information and support were referred to by both groups of participants although differences were evident in their views. The sub-themes are discussed as follows:

- (i) Using medicines for a long-term condition: a moral responsibility to live normally (Section 6.2.1)
- (ii) Using medicines as prescribed: an issue of understanding and engagement (Section 6.2.2)
- (iii) Information and support (Section 6.2.3)

Most of the patients took several medicines per day as shown in table 4.5. The need to take more than four medicines per day is classified as polypharmacy (Duerden et al 2013), a situation affecting the majority of patients in this study. The challenges involved in taking several medicines were identified by both patients and prescribers within the study. Patients referred to the time involved in taking them:

Well I couldn't open all of those every day...I bought one of those, I went to Lakeland and bought a thingy [a box with compartments sold as storage] and I do them every Sunday morning and put them in for the week because sitting there every day, night and morning, opening this little lot, well, it's ridiculous isn't it? [Laughs] (*Ursula, COPD patient*)

Time was a particular issue when medicines had to be taken before or after food:

With these six I have to take, seven extras at the moment [with rescue medication] I do find it very...(2 seconds) it's finding the time to take them, because the ones with my food I have to take between 15 and 30 minutes before I eat, well I haven't got that many hours in the day [laughs] (*Beverley COPD patient*)

Difficulties were also reported in remembering whether the medicines had been taken:

I mean I do it in the mornings, I use a Dosette box because I find it easier, because if I'm rushing out and I think 'Oh god, did I take it or didn't I?' I just find it easier, I can look and think 'Oh I haven't' (*Linda, Renal patient*)

One patient summed up his views by simply stating 'if they took a few more away It would make my life an awful lot easier' (*Christopher, COPD patient*)

Nurse prescribers also recognised the pressures involved in taking several medicines:

Oh I think in all honesty from what they tell me it's a combination of the sheer number of tablets and medications often...especially if they've got other comorbidities.. and the timing.. this one before meals, that one so long after meals, that one once before bed...as well as having to think about everything else (*Yvonne, Diabetes NPx*)

I think it is very difficult when they've got a huge multi, you know lots of pills they've got to take each day, it's very difficult for them (*Becky, Renal NPx*)

Although it is important to note that patients living with type 1 diabetes were not taking multiple medicines, they, in contrast, appeared to value the flexibility that changing to more frequent injections of short-acting insulin offered them:

a lot of people say 'oh four injections a day but... you've got quite a lot of control then—it's a lot more flexible. When you were only on two [injections], you'd have to have them at certain times and then you'd have to eat... With this, I can have my dinner at five o'clock; I can have it at eight o'clock if I'm going out' (*Diane, Type 1 Diabetes patient*)

I started to go on 4 jabs a day, oh quite a while back now, because it suited my lifestyle better. I used to be on one in the morning and one at night and you had to be very strict, you know (*Eric, Type 1 Diabetes patient*)

Although reported by a small number of patients only, this finding suggests that factors other than the number of medicines are also an important influence on patients' use of medicines, such as the extent to which the medication regime fits in with everyday life. This issue will be examined further in section 6.2.1.

Several patients identified their use of a Dosette box, whether commercially produced or self-organised, as a way of assisting their use of their multiple medicines. A Dosette box is a commercial version of a multi-compartment compliance aid (MCA), a storage device in which a patient's range of medicines are dispensed in compartments for specific times of the day which are designed to

support patients' use of medicines (RPS 2013a). These were also identified by four of the prescribers as enabling patients' use of multiple medicines, although one prescriber discussed the issues in obtaining these from community pharmacies, identifying it as a factor that preventing him from providing more support to patients regarding their use of medicines:

[b]eing able to have better access to things like Dosette boxes, because I know that with ...some pharmacies, they only have a certain number of Dosette boxes that they can take responsibility for each month (*Edward, Respiratory NPx*)

One prescriber highlighted that the funding constraints discussed in the previous section could also apply to the availability of a Dosette box to support the patient's use of medicines:

Another gentleman... he was a bit confused... he wasn't safe just to take tablets out of his own bottle and we contacted the GP and the GP actually refused to provide a Dosette box, because of the cost. His suggestion was that the family could go and buy... those plastic boxes, you know... [a box with compartments for storage].....but equally who's going to fill it (*Yvonne, Diabetes NPx*)

The prescriber viewed the use of a Dosette box as essential in providing practical help to the patient and was particularly concerned that, without it, the patient was likely to require further admission to hospital, which would incur much greater costs.

Seven patients referred to the use of a list to enable them to remember which medicines they should take and the times they should be taken. These were generally lists that they had developed for themselves. Only one prescriber referred to the development of a list for patients.

Two prescribers identified the importance of medication review in reducing the number of medicines that patients were being prescribed or in choosing an appropriate regime that suited the patient's lifestyle:

We try regularly to do a drug review on patients and try to take off ones that they don't really need... every time we see them in the clinic we do a drug review...if you've got an elderly person who is really struggling.. You want to try and cut their tablets down to as minimum as you can...' (*Becky, Renal NPx*)

Would you like to change the timing of your injections or tablets to suit your meals and to suit your social life, that's worked with people and sometimes changing the insulin regime will help as well (*Angela, Diabetes NPx*)

Medication reviews are identified as an important strategy in enabling the patient's optimal use of medicines (Clyne, Blenkinsopp & Seal, 2008, RPS 2013b). They were however discussed by these two prescribers only.

In addition to the large number of medicines taken on a regular basis, eight of the patients, all with respiratory conditions, had particularly complex medication regimes in which they were also required to take additional medicines on an 'as necessary basis'. Thus six patients with COPD had 'rescue medications', including oral steroids and antibiotics, which they were required to use when experiencing an acute exacerbation of their condition. The three patients living with bronchiectasis also had two different antibiotics which they were expected to use when first experiencing the symptoms of an acute infection. Each antibiotic was required to be used in response to a specific set of symptoms, indicating infection by a particular organism, requiring the patient to recognise which set they were experiencing.

Although the complexity of the medication regime is a well-documented factor in patients not using medicines as prescribed (Christensen 2004, McDonald et al 2002, Meichenbaum & Turk 1987), none of the patients suggested the use of rescue medications was difficult, other than in terms of the overall increase in the number of medicines they were required to take. One of the prescribers however highlighted the challenges involved in patients' use of rescue medications:

For patients to actually have that insight, to recognise their own symptoms and to self-medicate in a way is putting a lot of responsibility, a lot of pressure on patients (*Edward, Respiratory NPx*)

Three of the prescribers identified the potential for confusion and adverse consequences for patients when either branded or generic drugs were dispensed by pharmacies:

I was doing a clinic with an elderly lady, who I'd asked to bring her pills in and ...when she brought them in she had 3 boxes of Perindopril [to reduce high blood pressure] but they all had different names, different colours... the poor woman came in with severe hypotension [low blood pressure] and she was actually taking all of them...she got them from the pharmacy she just thought that she had to take all of them (*Becky, Renal NPx*)

For one prescriber, personal experience enabled her to recognise the challenges involved:

I get confused, I get a drug dispensed every month, it's always different... a different make, different colours, got a score down the middle, not got a score down the middle, and I'm a health care professional and our usual patients

with a Sun reading age of 10 or 11, what chance have they got? (*Wendy, Respiratory NPx*)

Patients tended not to identify the dispensing of branded or generic medicines as a particular issue. One patient however identified the concerns he felt when there was a generic medicine dispensed:

All of a sudden you get a slip of paper that turns round and says 'we're giving you this generic medicine', which is I presume a cheaper version and you think to yourself 'I wonder does it have the same effect...' Is it...? I don't know it might even be a placebo thing but when you read that, you think 'Oh Christ'... and it's got different packaging (*Peter, Oncology patient*)

Other than the factors discussed above, there appeared to be no other factors influencing patients' medicines use which were identified by both patients and prescribers. Instead two sub-themes were identified which showed that patients believed they had a responsibility to live normally and tended to view their use of medicines as a rational activity which was one part of their broader responsibility to live normally (section 6.2.1). In contrast, prescribers saw the patients' use of medicines as an issue of understanding and engagement (section 6.2.2). Information and support were discussed by both groups of participants although each group had different perspectives on their nature and value (section 6.2.3).

#### 6.2.1 Using medicines for a long-term condition: a moral responsibility to live normally.

Throughout their discussion, patients situated their use of medicines as part of living with a long-term condition within the context of their everyday life. They emphasised carrying on as normal and their use of medicines was presented as a moral consideration. Patients therefore highlighted a perceived responsibility to accept their condition and its treatments and to ensure there were as few disruptions to their typical routines as possible. Their use of medicines and, equally, their decision to not take their medicines as prescribed were therefore presented as logical decisions, based on the impact the medicine had on their well-being or lifestyle. Whilst at times the comments patients raised indicated the impact that living with a long-term condition and the associated medicines' use had on their lifestyle, most were keen to demonstrate ways in which they continued to lead a normal life.

The initial question asked within the interview was about the condition that had led to the patient's appointment with the nurse prescriber. Whilst intended as a background question to set the scene for the rest of the interview it provided an opportunity for nearly all of the participants to talk at length about their condition.

Ten patients talked about their initial diagnosis in some detail and, for many participants, it was evident that the diagnosis had been a significant life event requiring an emotional adjustment to living with the condition. Patients generally also pointed out however that they had achieved the necessary adjustment:

I struggled with the first year, couldn't figure it out... I hated taking insulin, it hurt. I didn't understand how you had to change your needles and you have down moments, but not many... I'm a glass half full person...I've got it sorted now (*George, Diabetes patient*)

In July, it'll be two years, so it's taken that amount of time for me to kind of come to terms with it, if you like, because at first...(2 seconds). I mean it's not life threatening like some conditions and it is something you can learn to live with, but it is a big life change (*Frances, Type 2 diabetes patient*)

Nine patients discussed the impact their condition had on their daily life. Whilst this impact was significant for some patients, most tried to qualify this impact by pointing out that this was just part of living with the condition or that things were improving:

I mean hypos, it's something you go through stages where you don't... you know you can go ages and not have one and then you might go through a spell where you have one every day. You know that's just part and parcel of it (*Diane, Type 1 diabetes patient*)

I can't go too long, I can't get my breath, even to go to bed. If the bed is not high I can't sleep so I have to sleep on the settee downstairs, I can't go up. But I'm getting better now, before was worse (*Harry, Type 2 diabetes patient referring to the heart failure from which he also suffered*)

It [renal dialysis] takes a lot of time but it's falling into place very nicely yeah, 'cause I do it of an evening 'cause I work during the day (*John, Renal patient*)

Nine other patients minimised the impact of their situation by comparing themselves favourably to others or outlining ways in which they were still able to engage in normal life experiences, even if this required them to organise various resources or other people:

You know there's more out there worse than I am. No, I get by alright. There's certain things we might benefit from but we're OK (*Christopher, COPD patient*)

I've worked from home for about 15 years so that makes a big difference because it's just the coughing side of things when you've got a chest infection, you can still sit at home with a laptop and work...in a work environment in an office it's not really nice (laughs) (*Nina, Bronchiectasis patient*)

I mean stupid things like putting duvets on, it kills me. I'm huffing and puffing and I mean certain things I just can't do which is very frustrating. I used to cut my own hedges but I can't do that now because of the dust. I have a bloke that comes out (*Beverley, COPD patient*)

The need to demonstrate that they were still able to manage their everyday life was evident even with four patients who raised points that showed their condition was beginning to have a major impact on their life. The patients however soon countered this negative view by pointing out how they were still maintaining a responsible approach and managing their daily routine:

I think I'm probably worrying unnecessarily but I don't go out much now....I worry about being on my own when this goes wrong [points to chest] .... But then I never thought I'd live this long, you see I think it's because I've had it for so long and I've always been disciplined and I've always done my physio....I've never been one to sit down and do nothing. My husband wasn't...we liked to forget we had problems (*Olive, Bronchiectasis patient*)

I used to do all sorts of things but I'm very restricted I'm afraid now. It hits you a bit hard then, doesn't it... the only help I have is a bit of gardening done. I don't have any help in the house.....I always cook and I like baking as well, I like doing things (*Ursula, COPD patient*)

Patients' discussion of their use of medicines also reflected a moral approach in which they used medicines only when necessary:

I did tablets, you know, painkillers when you're in hospital because you know when you've got a scar, you've got some pain from there (laughs)... but generally I won't (*Vicky, COPD patient*)

Needing to take medicines on a regular basis for their condition could therefore prove a challenge initially:

I'm not somebody who does take lots of medicines. At first I thought 'oh God this is a blooming nuisance, I shall start rattling', but once I got used to it ...no, it's not a problem anymore (*Frances, Type 2 diabetes patient*)

The patient went on to discuss how she kept all her tablets in a drawer in her bedroom so they were not visible to any visitors. The following statement indicates her anxiety that she might be seen as someone who relies on medicines unnecessarily:

I don't want other people seeing those pills sitting around because it makes it look as if you're a pill popper (laughs) (*Frances, Type 2 diabetes patient*)

Patients were also keen to emphasise that rescue medicines were used only when strictly necessary:

Like if I get my chest and that, I know it's getting bit tight...I'll ring up Edward and I'll take my amoxicillin and have my steroids for a week, but only if I need it (*Tina, COPD patient*)

Whenever I've been out and got breathless I come back, close my bedroom door and go on my nebuliser so I don't have any routine on that, only when I need it. I don't want to be dependent on it (*Christopher, COPD patient*)

Comments made by four patients highlighted the dissonance they experienced in not wanting to take medicines whilst recognising that they were necessary to manage their condition:

As I said the thing with me with medicines is I don't always like taking them... there's a little part of me that goes 'Oh I wouldn't take them if I don't have to'. But I know I have to... you think, well actually I know these make you better (*Nina, Bronchiectasis patient*)

When I couldn't breathe and I had to use the nebuliser I thought 'boy I can't do this'... but it's ridiculous, you can (*Beverley, COPD patient*)

Four patients however highlighted their use of medicines as a situation in which they had little choice and which therefore required little conscious thought or effort:

No, because it's just like breathing and I don't think about it at all. I suppose obviously you do at first...it's funny you have to [cope with it], don't you, you know, you don't have a choice in it (*Diane, Type 1 Diabetes patient*)

I'll have to take medicines after the transplant...so it's like it's never...it's not like it's ever gonna go away (*Ivan, Renal patient*)

I don't have to think about it. I know I've got to take it and that's it...' (*Tina, COPD patient*)

The importance of medicines being part of their normal everyday routine was emphasised by most patients as a factor supporting their use of medicines. Additional medicines or those that were not taken at regular times were reported to be more difficult to remember and some patients highlighted strategies which helped them to remember such as lists or alerts from their mobile phone:

No, regular ones, no... the one I've had problems with is the one which I've had to take with meals... literally it just don't go in me head,,, they keep drumming it into me that I need to because me phosphate's up but (laughs) I still haven't fathomed the system out ... I'm good at repetitive, anything repetitive like breathing [laughs] (*John, Renal patient*)

Well, I got into a fair routine with my ordinary ones. These other extra ones are a bother... so that's why I made a chart for them...' (*Anne, COPD patient*)

I've made that part of the routine 'cause I knew I was very bad at taking my inhalers and the only other thing, for the Erythromycin, I have to take it Monday, Wednesday and Friday, so I've actually put an alarm on my phone (*Nina, Bronchiectasis patient*)

Most patients denied that taking medicines on a regular basis was a major issue, particularly if the medicines could be fitted in to their daily routine. When patients shared episodes of not taking medicines as prescribed they were always able to offer reasons for not doing so, which were mostly logical when viewed from the patient's perspective (Donovan & Blake 1992, Horne & Weinman 2004). They also

suggested that it was either an infrequent, one-off occurrence or a situation which they were able to resolve promptly. Reasons for not taking medicines as prescribed included being too busy, not liking how the tablet made them feel or simply forgetting:

Except this morning, I didn't take me pills. But I will take them when I go back you know, I just will catch up. I rarely, I don't, I can't remember another time that I've by-passed it, but I think with nerves this morning, getting going and leaving early (*Mary, Bronchiectasis patient*)

Sometimes I forget, you know you have a meal and you forget to do your jab and it soon tells you though a bit later and you think 'oh I feel a bit high now' or whatever, so you do another (*Eric, Type 1 Diabetes patient*)

I must admit when I was on the blood pressure pills I didn't like them ...because I felt so bad and no one could say whether it was this or it was that 'cause I was taking so many types. Yeah, I just literally stopped the lot ...And then I went to the Doctor and said 'can we sort of start again? (*John, Renal patient*)

For one patient, taking a medicine at a time of day which was incorrect actually ensured that he remembered to take it since he was able to make the medicine part of his routine with the others he had to take:

It's just a habit, I get up in the morning and take them... the blood ones, the blood thinning one, I should take at night but I take them all first thing in the morning...well then I shan't forget them...I know that's wrong because they keep telling me I should take it at night (*Steve, Oncology patient*)

Three patients who had had new medicines prescribed during their consultation with the nurse prescriber had decided not to take it for reasons such as they preferred the initial medicine they were taking or were concerned about the effects of the new medicine:

I'd taken that before [Symbicort prescribed during consultation] and there must have been a reason why I was then put on the purple accuhaler [Seretide] and I prefer that ... I got my GP to put me back on that (*Anne, COPD patient*)

Well to be honest with you I missed it [Bisoprolol prescribed during consultation] on two occasions this week 'cause I just haven't felt very well and I didn't want to develop, you know, feeling any worse...' (*Keith, Renal patient*)

One of the patients had not taken the additional diabetes drug, Metformin, prescribed during the consultation because he did not agree with the diagnosis that he had type 2 diabetes. His memory of the time when he was informed that he had diabetes was that he was told by the diabetes specialist nurse that:

You could be type 2, you could be borderline type one but I think you'll be type one... and she's proven absolutely right. I have been insulin dependent ever since...' (*George, type 2 Diabetes patient*).

It was evident throughout the interview that the patient was convinced that he had type 1 diabetes and, therefore his decision not to take metformin, normally prescribed for patients with Type 2 diabetes, appeared rational. He had informed the Diabetes Centre of his decision and a further appointment had been arranged to discuss his use of the medicine (extract from field notes).

In summary therefore, patients viewed their long-term condition and the medicines they were required to take within the context of their everyday life and discussed their commitment to carrying on as normal. They suggested a moral and responsible approach in the ways that they managed living with a long-term condition and their use of the medicines needed to manage their condition. Taking medicines on a regular basis was not a problem for them unless it compromised their ability to carry out their normal routine. Nurse prescribers however offered a different account of patients' use of medicines which is explored below.

#### 6.2.2 Using medicines as prescribed: an issue of understanding and engagement

In contrast to patients' views of their moral and responsible approach, the prescribers discussed patients' management of their condition and use of medicines in terms of the level of patient understanding and individual engagement with their treatment. All prescribers identified the issue of patients not taking medicines as prescribed as a problem, with some prescribers describing it in superlative terms:

I think it's more widespread than we realise (*Dawn, Oncology NPx*)

A huge challenge (*Wendy, Respiratory NPx*)

Oh my God there's major challenges...in our department the main challenge is compliance (*Becky, Renal NPx*)

Prescribers highlighted a number of reasons why patients do not take their medicines as prescribed. As discussed earlier (see section 6.2), the number of medicines people were required to take was highlighted as a key factor by several prescribers. The side effects caused by the medicines used were also frequently mentioned and the importance of enhancing patients' understanding of the side effects and how to deal with them was emphasised as the solution to this difficulty:

Concern about side effects is a big issue for patients and that's the reason I think a lot of patient don't take their medicines, so maybe, if we were more thorough covering that one (*Dawn, Oncology NPx*)

Two prescribers however pointed out that patients often interpret the signs and symptoms they experience as side effects, even though the symptoms are unrelated to the drug or have been reported prior to being on the medicine. This placed them in a difficult position as they needed to stop the medicine even though it could be therapeutically beneficial:

[today] I saw somebody who said they were itching all over with their new inhaler and again you can't, and was getting a hairy front lip, I can't say it wasn't the medicine but she was stable on her previous inhaler so you kind of have to go back anyway (*Claire, Bronchiectasis NPx*)

[Patients] say 'I've got all these things and I can't take the medication because of all these things', no, irrespective of the fact that they had all of those symptoms prior to being put on the medication they will attribute it to the medication you've given them. So yeah, I...I think it is difficult (*Edward, Respiratory NPx*)

Patient understanding of their conditions and the medicines used was discussed by all of the prescribers who described the importance of fully educating the patient. Such education was normally provided within the consultation and focused on issues such as the physiology of their condition, the ways in which their medicines worked and how it needed to be taken. Patients with Type 1 diabetes, in line with NICE guidelines (NICE 2004), were instead invited to a structured education programme, the Insulin Dose Adjustment Course (IDAC), which educates the patient about all aspects of their condition, including managing their insulin, dietary and activity levels:

[Its] helped enormously in helping people to understand... you take them back to the basics of what diabetes is, so we go through the healthy bit and then go through diabetes and we've got our model over there [model of pancreas] ... it's probably the first time they've ever seen the anatomy... and going back to hypos and hypers and DKA [signs of very low or very high blood glucose levels] (*Angela Diabetes NPx*)

Angela went on to discuss how it was important for the patient to have a reasonably good education level to understand all of the issues discussed within the IDAC course, particularly in relation to being able to do the calculations of insulin doses necessary for certain levels of carbohydrate intake.

The majority of prescribers also highlighted issues with patients' engagement with their treatment that could have an impact on their use of medicines or the prescriber's ability to work with patients effectively. Five of the prescribers, for

example, highlighted the difficulties they encountered because patients do not always share that they are not taking their medicines as prescribed. This could lead to the unnecessary prescription of drugs or could have significant consequences for the patient's well-being:

It's always useful though if they tell you if they're not doing it, so at least you know, it's when they pretend that they are and you're blissfully thinking that they are and you think 'well, I've tried that and I've tried that and I've tried... where can I go next? (laughs)...I've really tried everything (*Dawn, Oncology NPx*)

Some people don't admit that they're not taking their medication although when you look at their results you sort of think... a gentleman in mind... he was on huge amounts of insulin...he was in and out, in and out in and out with hyperglycaemia [high blood glucose levels]... district nurses, just for a period, were asked to go in and suddenly he's having massive hypos [low blood glucose levels]... still he was adamant that he was having his insulin. Again some people you just can't get to the bottom of... (*Yvonne, Diabetes NPx*)

I had a wee girl in, 32, and ventilated about a month ago and I follow up all the patients at home who have near fatal asthma attacks because usually it's to do with drugs or lack of...it's multifactorial but one of the things is non-compliance... she's like a convert, nobody had picked up that she was having all these prescriptions for short acting [inhalers] but not her long acting (*Wendy, Respiratory NPx*)

Five of the prescribers identified that patients, despite frequent discussion of their medicines, would often continue to not take their medicines in the way prescribed. Examples were provided of patients asking the pharmacist to dispense only the medicines they wished to take or patients insisting that they have not experienced any adverse effects from taking medicines their way:

When I've said about taking medicine really and at the right time, that they have actually said 'well you know I've always done it like this and everything seems to be OK (*Angela, Diabetes NPx*)

Such situations were often described by prescribers in a way that showed their sense of frustration and powerlessness as they could not influence the patient's behaviour:

Whatever they say to you in that little room will be completely different to what they go home and do and I don't think there's an easy way of changing that. Patients will make up their own mind... they are basically agreeing to whatever you say but they'll do their own thing when they get out there...' (*Dawn, Oncology NPx*)

They don't want to upset you so they are basically agreeing to whatever they say but they'll do their own thing when they get out there...' (*Angela, Diabetes NPx*)

I guess really I give them a piece of paper and they walk out of the door and after that I've not really got any control over what they do (*Edward, Respiratory NPx*)

For one prescriber this situation adversely affected the patient-prescriber relationship:

I think in the majority of those circumstances [patients not taking medicines] the relationship breaks down really. I can't see the point in somebody coming in if they're not going to take anything... the majority of the help I offer is pharmacological and if they won't take that, what else would they have me do? (*Edward, Respiratory NPx*)

A limited number of strategies were identified to influence the patient's engagement with their treatment. One prescriber discussed the importance of working with patients to ensure that any medicines were making them actually feel better and that they fully understood the reasons for taking the drugs. A non-judgemental approach was highlighted as necessary by two prescribers and a further prescriber highlighted the importance of negotiation and compromise so that patients were offered a trial of medicines to establish whether they would be of value to them. One of the prescribers however highlighted that dealing with the consequences of patients' inappropriate use of medicines was a regular occurrence:

I think it is a hassle to them and part of our job actually is that we describe it as them falling overboard and bringing them back on, getting them to sail again and we do that on a regular basis (*Angela, Diabetes NPx*)

In summary, nurse prescribers identified patients' use of medicines as a significant issue. They outlined a number of factors that contributed to this situation, focusing particularly on the patients' understanding of their condition and its treatment. Issues suggesting that many patients demonstrated a lack of engagement with their treatment were explored.

The following section will examine the perspectives of patients and prescribers in relation to the information and support required to support medicines' use.

### 6.2.3 Information and support

Whilst the role of information and support in enhancing patients' medicines use were frequently discussed, patients and prescribers demonstrated different perspectives on each factor.

### 6.2.3(i) Information

As already discussed prescribers believed that the patient's level of understanding was important in enabling patients' use of medicines and all prescribers discussed the kinds of information they shared with patients to achieve this. Information focused on the nature of the condition and its underlying physiology, the nature of the medicines and their likely side effects, together with the mode of action of any drugs so patients could understand factors such as the dosing schedule or why effects may take some time to be experienced.

Patients also valued information believing that it was important in enabling them to manage their condition:

'cause I'm the sort of person who needs to know what it is and then I can deal with it...' (*Nina, Bronchiectasis patient*)

That was very good that course [IDAC] in fact. I mean they taught me a lot, in fact. You know after 34 years it changes so much and you don't get informed (*Eric, Type 1 Diabetes patient*)

In addition to Eric's suggestion above that information was not always available; four other patients also stated that they did not receive sufficient information. For two of the patients this lack of information had led to them not using their medicines correctly which had caused problems with their health. Such comments however usually related to the health care they received in general and not to the nurse prescriber:

It's always been the same in the NHS, if you ask you find out. You don't necessarily get told but if you ask to the point of interrogation then you get answers (*Ivan, Renal patient*)

I mean the doctors are a lot better now....but even now they're inclined to hand you a pill and that I don't like (*Beverley, COPD patient*)

Patients were generally satisfied with the information they received from the nurse prescriber or other members of the specialist team:

We are quite lucky in renal...if they're giving you something they'll tell you what it's for and why they're doing it and how long it's gonna be for (*Ivan, Renal patient*)

Six patients expressed their lack of satisfaction with the information provided by primary care staff, including the General Practitioner and practice nurses:

Don't know nothing about it [newly diagnosed type 2 diabetes], nobody give me a lot of information about it. I mean they gave me some paperwork but most of that was to do with the heart. There's not much I can do with that but nobody really explained things (*Christopher, COPD patient*)

Both patients and prescribers discussed the patient information leaflet, which must legally accompany each pack of dispensed medication (MHRA 2012). Patients presented mixed views of the leaflet with many saying that they always read them and others suggesting that the information could provoke anxiety. One patient (Beverley, Respiratory patient) suggested that she normally never read them as 'you'd never take anything' although she had recently as she had been asked to double the dose of her blood pressure tablets and wanted to 'know what's what'.

Four prescribers also agreed that the patient information leaflet could provoke patient anxiety. They also pointed out that patients do not always understand information they are given and some may need to be reminded about what is required:

[a]nd kind of reaffirm, reaffirm things to people and some people kind of take it on board and run with it, other people just need that constant reassurance (*Yvonne, Diabetes NPx*)

One prescriber pointed out the difficulties that arise when patients do not understand the information given:

I think patients get very confused about what they're supposed to take and sometimes unpicking that can be difficult and patients will be adamant that they've been told that's what they've got to do (*Dawn, Oncology NPx*)

The media as a source of information was discussed by both patients and prescribers although different views were presented by each group. Although there was no specific question about their use of the media, four patients presented it as an important source of information about their condition. One patient had been led to seek medical advice about his symptoms by a television drama:

I was watching...I was watching Casualty [a medical drama] and this diabetic got called in and I said that's me (*George, Type 2 diabetes patient*)

Three prescribers spoke more cautiously about patients' use of media sources. One prescriber (Claire, Bronchiectasis NPx) pointed out that the most commonly used website for her specialist area did not reflect the differences in treatment protocols typically found in different units or the different manifestations of the disease itself. She also felt that the symptom profile of patients who frequently used web-based discussion groups was likely to be more severe with patients tending to be homebound rather than working, giving patients a biased view of living with the condition. A further prescriber talked about the issues apparent when patients are given wrong information in the media:

You have to listen to their reasons why [they're not taking medicines] and sometimes you can then negotiate because clearly they've got misinformation from that great medical newspaper, the Daily Mail (*Wendy, Respiratory NPx*)

### 6.2.3(ii) Support

The types of support required to facilitate patients' use of medicines was discussed by both groups of participants. Support from family and friends was discussed by several patients although it is important to note that four patients stated that they had no need for support, particularly in relation to their use of medicines.

The support valued by patients included practical support with the management of their symptoms and their use of medicines:

I mean [name of husband] will because he's got excellent hearing where mine's poor and I won't hear my chest rattling. And he will say 'you're rattling, come here' and he will [do physiotherapy] because he can, the physio's taught him (*Mary, Bronchiectasis patient*)

[My wife] she always asks me 'have you taken that, have you taken this?' and yet she's got, she takes what six or seven a day...' (*Steve, Oncology patient*)

Several patients discussed the value of having support available from family or friends during exacerbations of their condition or in emergency situations. It was evident that the non-availability of support for such situations could be a concern:

The children, they know that if I'm unconscious [from low blood sugar] just call an ambulance...I've come round many a time and there's been Mum or brother standing over me (*Diane, Type 1 Diabetes patient*)

I feel really isolated. My friend of 65 years died a year ago... if you're not well at night she'd say just ring and tap 3 times and I'll be round...I do worry at night time in case I'm taken ill...but as I say, I've got the phone and her husband's still got the key (*Ursula, COPD patient*)

The support offered by family and friends in understanding and remembering information was also valued:

I'm taking information from not only seeing Becky [nurse prescriber] but the dialysis unit and everything also so she [wife] comes with me sometimes, she'll pick up some of the information and help me through, remember it (*Keith, Renal patient*)

Many of the prescribers also highlighted the value of family and friends in understanding and remembering information:

I think it's [support from family and friends] essential and I do like if somebody's with somebody to come in as well because you always get a different perspective... at least the family member or whoever knows what you're trying to achieve... they've got added support at home when they're discussing it (*Claire, Bronchiectasis NPx*)

This view was however qualified by four of the prescribers who suggested that family members may also require education to understand the information:

I think so [family support is helpful] but then the family have got to be involved in education as well. Her family have always seen her as wheezy or chesty and that was normal so when she started deteriorating...when the ambulance went to get her... the family were still going 'oh she's just wheezy and having one of her turns' (*Wendy, Respiratory NPx*) [*Discussing a situation when a young woman had a near-fatal asthma attack*]

One prescriber also suggested the family may be an adverse influence on the patient's medicines use:

I can think of some people that I see that families will probably recommend that people don't take medication, as much as there will be families supporting people (*Edward, Respiratory NPx*)

Whilst patients were positive about the support they received from family and friends, six patients however pointed out that they demonstrated a moral and responsible approach to this in that they tried not to burden family members with their needs, instead considering the family's needs before their own:

I think the family, I probably don't...I'll mention it you know, I've got a chest infection or something but I don't tend to [make a fuss]... my sister, she's got rheumatoid arthritis, so you always worry about other people...you don't put things on other people 'cause they've got their own things going on (*Nina, Bronchiectasis patient*)

Well she reminds me and I remind her...you come in our house and you see us both sitting on the settee with all our tablets in a row [laughs] (*Steve, Oncology patient*)

One patient, with severe bronchiectasis, said how she had stopped visiting relatives because 'if I'm poorly when I go up there I wouldn't want to worry them' (*Olive, Bronchiectasis patient*)

All patients talked about the support they received from the health care system. Their positive views of the support received from the nurse prescriber have already been discussed (section 6.1.1). The support and care received from their specialist team was also generally evaluated positively;

the unit are particularly good, if there's ever been a problem in the past when I've been taking something... they'll change it instantly find something else or they'll stop it (*Ivan, Renal patient*)

Two patients however referred to the lack of resources within the team that could adversely affect their experience:

they're there to help me and they do, don't get me wrong, they do, but they're so pushed for time sometimes and I feel sorry for them...if they're given even

a few extra minutes to help you out, it would be a lot better for you (*John, Renal patient*)

Four patients suggested that they would prefer more regular contact with the health care team, perhaps through a telephone call:

You don't see them often enough to be truthful, I don't think. I think you should be able to go more than once a year (*Eric, Type 1 Diabetes patient*)

More regular contact was also identified as important by one of the prescribers although she also pointed out that this was impossible due to a lack of staff resources.

if somebody at some point would ring in a months, two months, three months and say 'how's it going?' Just a little pick-up type you know? But we can't just do that, we don't have the staff (*Wendy, Respiratory NPx*)

Generally negative views were expressed by patients about primary care services and it was felt that G.P.s and practice nurses did not have enough knowledge of their condition. This caused particular difficulties at the time of the patient's initial diagnosis:

I mean the GPs are hopeless especially for the bronchiectasis...they don't understand. They have no knowledge you know so I don't go to them with a problem. I just email straight to here [hospital] (*Mary, Bronchiectasis patient*)

[Practice nurses], bless their hearts, they're really lovely and they really tried, but one admitted to me that she didn't really know much about diabetes....when it [the diabetes] happened you feel a bit....apprehensive about dealing with it. So you need to know that these people do know, are sure of what they're telling you (*Frances, Type 2 Diabetes patient*)

Frances then went on point out that she had joined a diabetes research study at the hospital just so that she could gain more access to information. She also suggested that, with the increasing number of people with diabetes, primary care services 'need to be on the ball with that'.

Patients generally liked the repeat prescription service and appreciated its convenience particularly when they could order their prescription online. Two patients referred to the difficulties of having to keep checking the number of medicines they had and knowing when to order further supplies. There was however general agreement amongst both patients and prescribers that the repeat prescription system led to patients building up stocks of medicines:

I've got a cupboard full of them and I don't use them. ...They're all on my repeat prescriptions...when they ask me why I don't want to have them I have to explain why (*Christopher, COPD patient*)

also when you go through the repeat prescription from the doctors...often you'll see things that they've actually had repeated... and they're not even actually on them, so they must be mounting up and mounting up at home their pills (*Becky, Renal NPx*)

In summary, both patients and prescribers believed that information and support were important influences on patients' ability to manage their condition, including any medicines used. Different views were however expressed by the two groups of participants as to the availability of information and the value of family support. Patients were also less positive in their evaluation of the support available from the general practice surgery. The repeat prescription system was viewed as a factor in patients building up unnecessary stocks of drugs by both patients and prescribers.

#### **6.4 Summary and conclusions**

This chapter has reviewed the themes that emerged from the interviews with patients and prescribers. Two main themes emerged including the nurse's role as a prescriber and patients' use of medicines. Prescribers demonstrated a professional approach to their role and valued it greatly, particularly for its convenience. Patients also evaluated the nurse prescribing role positively in terms of the relationship they had with the prescriber, reporting that they were able to ask any questions and felt they were treated as an individual.

Patients consistently used a discourse of moral responsibility in relation to living with their long-term condition and the associated medicines' use. Patients perceived their use of medicines as non-problematic although they preferred medicines that could be used as part of their everyday routine. There was some evidence that the medication regime was modified to enable it to be compatible with the patients' everyday responsibilities. They valued information about their condition although, whilst they evaluated the information provided by the specialist team positively, information from general practitioner services was reported in negative terms. Support from family members was found to be helpful, particularly in an emergency situation, although many patients reported that they ensured family members were not over-burdened with their concerns, thus demonstrating a moral responsibility in protecting family members.

In contrast prescribers felt that patients' use of medicines was a significant problem and one that could be attributed to a lack of understanding and engagement with their condition. Prescribers also believed information to be important in enabling

patients' understanding of their condition and reported sharing very detailed information about the condition with patients. They also believed many patients were not able to understand the medical information provided. There were mixed views expressed about the value of family support.

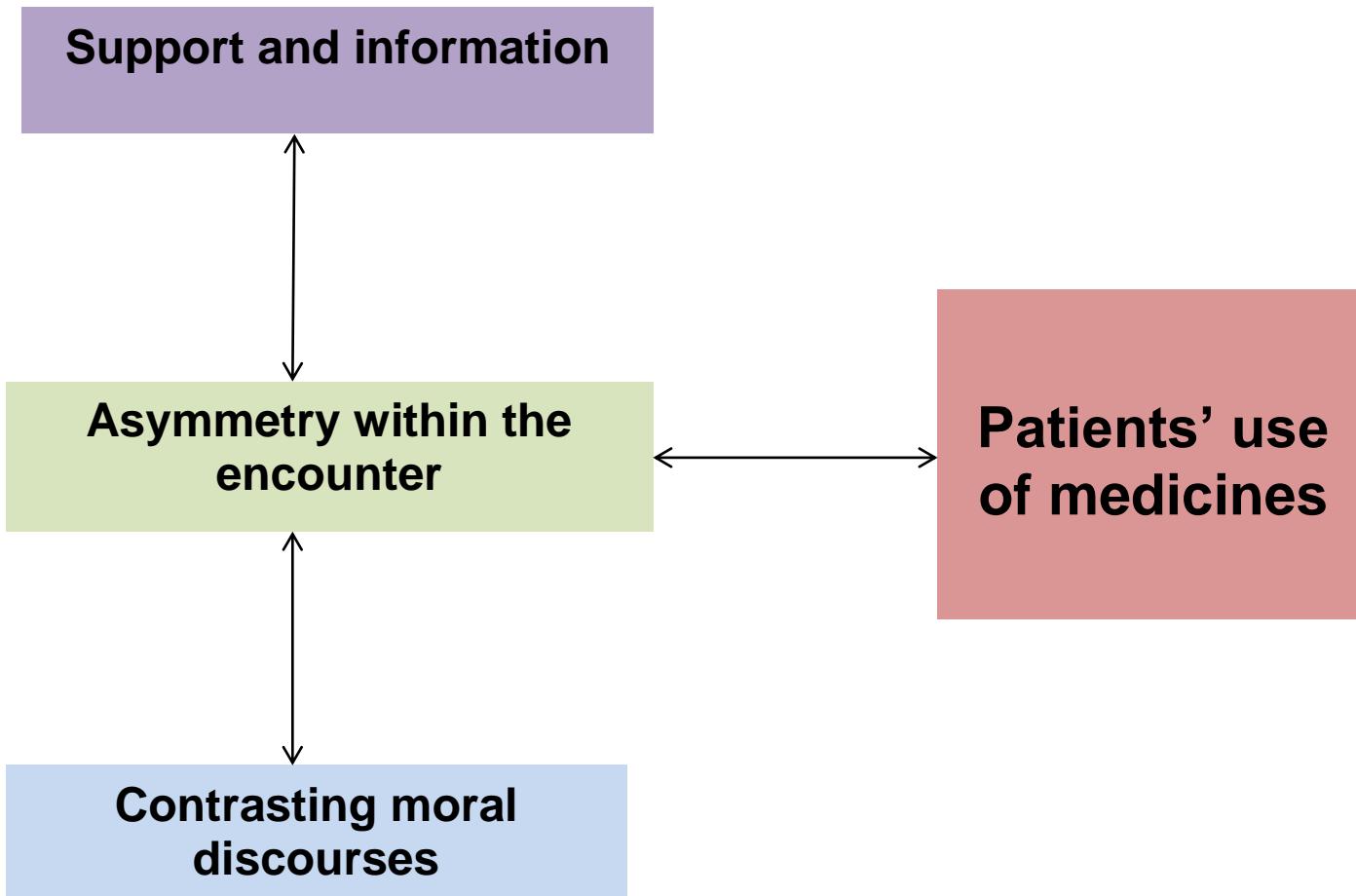
The contrasting discourses shown by patients and prescribers suggest that there is the potential for conflict should the prescriber recommend activities that are not compatible with patients' responsibility to live life normally. This has the potential to lead to resistance to the advice offered as found within the encounter data. This argument will be developed further in the following chapter in which the findings of both the encounter and interview data sets will be synthesised to identify key conclusions from the project. An explanatory framework will also be offered.

## CHAPTER 7: DISCUSSION AND CONCLUSIONS

This study was undertaken to examine the ways in which patients and nurse/pharmacist prescribers manage the prescribing encounter in relation to the patients' use of medicines for a long-term condition. Research aims were focused on a number of related issues such as the patients' views of the prescribing encounter and patient and prescriber views of the influences affecting medicines' use and how such use can be enhanced. Observation of patient-nurse prescriber encounters and interviews with both patients and prescribers were undertaken. Discourse analysis was the chosen methodological approach and, due to the limited number of studies focused on the nurse prescribing encounter, a generic approach to discourse analysis was used to enable sensitivity to the full range of issues which might emerge from the study.

This chapter presents a synthesis of findings from the encounter and interview data sets in order to form a coherent and critical account of the management of patients' use of medicines within the nurse prescribing encounter. It first examines prescribing practice relevant to patients' use of medicines, including the support and information provided and then reviews the ways in which the patients' use of medicines was constructed. The key discourses used by each group of participants are examined to illustrate the subtle asymmetry that was apparent in the encounter. The study's findings are illustrated in Fig. 7.1 presented below. The correspondence between the study's findings and existing literature is then explored.

Figure 7.1: Final thematic map: Encounter and interview data sets



Whilst there was evidence that nurse prescribers' practice did not always reflect policy and professional guidance about facilitating patients' use of medicines (e.g. Nunes et al 2009, RPS 2013b) and their approach to patient education could be enhanced, it is suggested that recommendations focused on such issues only are unlikely to enhance patients' medicines' use. A thesis is instead developed within the chapter that suggests that, although the patient-prescriber encounter appeared to take place in the context of a long-term relationship which was highly valued by patients, it was characterised by an asymmetry similar to that found within the doctor-patient encounter meaning that the patient's experience was not fully considered. Contrasting moral discourses were used by patients and prescribers to construct patients' use of medicines which again meant that there was reduced consideration of the patient's perspective.

Conventional explanatory frameworks appear unable to fully explain such findings. The writings of Foucault (e.g. 1977, 1980a, 1980b, 1980c, 1980d, 1980e, 1988, 1990) are instead used to present a critical explanatory framework to illustrate the subtle manifestations of power, subjugated knowledge and resistance within the encounter. Whilst Foucault's analytic approach is focused on the deconstruction of phenomena rather than establishing new recommendations for practice (Stevenson & Cutcliffe 2006), his conception of technologies of the self (Foucault 1988b, Martin et al 1988) is explored in relation to its possible contribution to the enhancement of patients' medicines use. The chapter concludes by evaluating the quality of the study and its contribution to knowledge and understanding. Implications of the study for research, practice and education in the field of non-medical prescribing are explored.

## 7.1 Support and information

Discussion of patients' use of medicines took place in the context of encounters which were characterised by a positive and often long-term relationship between patients and prescribers. As previously reported in this area, patients expressed significant satisfaction with the nurse prescriber's role and practice noting a caring approach and good interpersonal skills (Courtenay et al 2010, Latter et al 2011, Stenner et al 2011). Nurse participants were all experienced prescribers who prescribed on a regular basis. They all evaluated the prescribing role positively, reporting it enabled a better use of their skills, provided additional opportunities to work autonomously and was convenient for both patients and prescribers (Cooper

et al 2008a, Creedon et al 2009, Jones 2009). There were however several areas in which practice was not fully in accordance with national guidelines and best practice in prescribing to support patients' use of medicines. Such areas included prescribing and review of medicines (section 7.1.1), strategies used to support medicines' use (section 7.1.2) and the provision of information about medicines (section 7.1.3).

### 7.1.1 Prescribing and review of medicines

Whilst there was only a small number of prescriptions issued during the encounters, discussion of the prescribed medication largely focused on the ways in which they should be taken with minimal exploration of patient views about the medicine or encouragement to raise any queries, practice which again does not reflect national guidelines relating to this area (Nunes et al 2009, RPS 2013b). In common with previous studies of nurse prescribing (Courtenay et al 2009a, 2009b, Latter et al 2007a, Stenner et al 2011), information about the possible side effects of any new medicines tended not to be explored despite its importance in enabling patients' informed consent and the emphasis placed on it as a requirement for safe prescribing practice in professional and policy guidelines (General Medical Council 2013, NMC 2006, Nunes et al 2009, RPS 2013b).

Review of patients' medicines appeared to consist largely of establishing what medicines were being taken and discussion of medicines' use generally involved a checklist approach and, in contrast to national guidelines, there appeared to be no in-depth approach to the review to establish whether the medicines remained appropriate for the patient or to explore the patient's experience of using them (Clyne et al 2008, RPS 2013b). There was also minimal acknowledgement in any encounter of the patient's experience of using medicines or the potential for non-adherence (Nunes et al 2009, RPS 2013b). Whilst there are therefore several ways in which the prescribers' practice could be developed in relation to medication reviews it is important to note that Holland et al (2005) found, in a large trial of domiciliary medication reviews conducted by non-prescribing pharmacists, that the intervention was associated with an increase in hospital admission rates and additional home visits by patients' general practitioners. Further study is therefore required of the nurse prescriber's role in medication review and its impact on patient outcomes.

Whilst the study was not developed to directly examine the extent to which patients used their medicines as prescribed, it was apparent that, according to conventional

definitions of adherence (e.g. Nunes et al 2009, Vrijens et al 2012) several patients could be described as being non-adherent to both their prescribed medication and any recommended lifestyle changes. Within the interviews prescribers reported that they used a variety of strategies to support patients' use of medicines however, the provision of information about the condition or instruction about medicines' use was the most common approach observed within the encounters and such issues are explored further in sections 7.1.2 and 7.1.3 below.

### 7.1.2 Strategies used to support medicines' use

The use of multi-compartment compliance aids (MCAs) was mentioned by many prescribers and there appeared to be a general acceptance that MCAs were an important way of supporting patients' use of medicines although prescribers highlighted the general difficulties in obtaining them. There are concerns however that MCAs are safe due to the stability of drugs when stored outside their original packaging and the errors that can arise when transferring drugs to the MCA (RPS 2013a). This latter risk is likely to be much greater when patients are developing their own MCA, which was a common occurrence in this study. Bhattacharya et al (2014) also reported an increased likelihood of adverse drug events when MCAs were used. Comprehensive assessment of the suitability of an MCA for the individual's needs is therefore recommended (RPS 2013a) together with a cautious approach to their use with certain high-risk drugs (Bhattacharya et al 2014). A critical use of MCAs was not evident in this study. Prescribers also did not appear to use medication lists or charts to remind patients about their medicines despite research which suggests their value to patients (Knight et al 2013) meaning that many patients found it necessary to develop lists for their own use.

It would be speculative to suggest reasons why prescribers did not, in practice, use the range of strategies to support patients' use of medicines they identified within interviews such as the need to support patients and carers, simplify the medicine regimen, stop unnecessary medicines etc. All such strategies are recommended within national guidance (Clyne et al 2008, Nunes et al 2009, RPS 2013b). The lack of time reported by most prescribers may be an influence although it is generally argued, in relationship to shared decision-making, that practice of this nature takes additional time only when first implemented (Coulter & Collins 2011). It is however important that the management of patients' use of medicines is studied over time to allow a comprehensive exploration of practice (Courtenay et al 2009a). This need is

emphasised in the context of the generally long-term relationship between patient and prescriber found in the current study.

One factor which appeared to constrain nurse prescribers' ability to support patients' use of medicines was the difficulties in communication with the patient's General Practitioner. Several hospital-based prescribers referred to difficulties they encountered in communicating with the patient's general practitioner since patients were often not prescribed a medicine initiated in the out-patient clinic or medicines were continued unnecessarily leading to concerns about the possible adverse effects that might occur. The majority of prescribers relied on letters to the patient's GP as their primary form of communication.

One study however found that GPs reported spending less than one minute reading clinic letters (Parks et al 2011). It is therefore perhaps not surprising that information about medicines appears to be missed. Training in letter writing and the use of letter templates have been recommended for doctors (Hook et al 2006:294) and there is a need for further study of the optimal structure and content of letters from nurse prescribers. The effectiveness of other modes of communication with the GP should also be explored.

Prescribers' perceptions of the inadequacy of the patients' understanding of their condition and its management meant that the provision of information, frequently very detailed, was a major activity within encounters.

#### 7.1.3 Provision of information about medicines

Despite the emphasis given within the prescriber interviews to a range of strategies used to facilitate patient understanding, the dominant approach used within the encounter was the provision of verbal information only with minimal use of information in any other form. The information provided was mostly of a biomedical nature and there was little discussion of the patient's experience or concerns, reflecting the findings reported by Sibley et al (2011). The almost exclusive emphasis on patient instruction applied to all of the encounters observed although it is again important to acknowledge that one encounter only was observed for each patient and different strategies might be used in other encounters (Courtenay et al 2009a).

Information was provided even when patients attempted to assert their expertise on the issue being discussed, with patient accounts of their knowledge or responsible

approach to managing their medicines frequently being interrupted by the prescriber. Patients generally adopted a very passive role when information was provided, not asking any questions and demonstrating minimal acknowledgement of the material delivered. It is therefore difficult to be certain of the extent to which patients received or understood the advice offered or indeed whether they would make any necessary change in their health behaviours.

Salter et al (2007) reported similar findings in a study of pharmacists engaged in domiciliary medication review with older patients. Advice-giving was usually didactic in style and unsolicited, leading to the minimal involvement of many patients in the review process, preventing them sharing their expertise and experience in using medicines for their condition. Patient resistance to the advice was evident. It was argued that pharmacists' approach to medication review was informed by a dominant compliance paradigm (Salter 2010) which could lead to patient uncertainty about the advice offered and a reduced confidence in their ability to manage their condition (Salter et al 2007). The current study suggests that patients valued the advice and information provided by prescribers although patient confidence and understanding were not evaluated.

Lutfey (2005) in an ethnographic study of patients, doctors and a small number of nurses in two diabetes centres also found that practitioners commonly adopted an educational approach to enhance patients' management of their condition. This normally involved the provision of information about the condition and the likely consequences of not managing the condition appropriately. Other approaches were however also adopted by practitioners in Lutfey's study, including assuming the role of detectives, negotiators, salesmen, cheerleaders and/or policemen to interact with patients, the stance adopted being based on an assessment of its relevance for the individual patient. There appeared to be little evidence of approaches other than the provision of information within the encounters in the present study.

Described as the 'rational model' of health education (WHO 2012:21), an approach focused on the provision of information is based on the assumption that increasing a patient's knowledge of their condition is sufficient to lead to a rational change in health behaviours. There is however significant evidence that increasing motivation for behaviour change usually requires other sources of support in addition to information (WHO 2012). An approach such as motivational interviewing (Miller & Rollnick 2001) has shown some potential in enhancing patient adherence to medicines although further research is necessary to establish its effectiveness.

(Jackson 2013, Possidente et al 2005, Riekert et al 2011). The importance of patient motivation was mentioned by some prescribers within the interviews although they did not appear to focus on motivation in the encounters. Further examination of the extent of nurse prescribers' understanding of health teaching approaches and the support they receive in developing the necessary skills therefore appears necessary.

In summary this section has highlighted ways in which prescribing practice could be enhanced to ensure that is in accordance with national guidelines for enhancing patient adherence to medicines and optimising their experience of medicines. These include the development of the medication review within the encounter and routinely raising the possibility of patient non-adherence to prescribed medicines in a non-judgemental manner. A wider range of strategies to enable patient's use of medicines, in addition to the use of MCAs, could also be used e.g. the use of medicines lists. Strategies to enhance the communication between hospital-based prescribers and the patient's general practitioner should also be explored.

Further research is recommended to explore such issues further although any investigation needs to be conducted over several encounters. The approaches used by prescribers to inform patients about their condition and its management could also be developed to incorporate approaches to behavioural change such as motivational interviewing which has some demonstrated effectiveness in enhancing patient adherence.

The extent to which such revisions in practice would enhance patients' medicines use is however unclear since the encounter was also characterised by an apparent asymmetry between the patient and prescriber and the use of contrasting discourses by each party. These issues are explored further in section 7.2 below.

## **7.2 Asymmetry within the encounter**

There was evidence of asymmetry in the prescribing encounter, shown through the prescribers' domination of the agenda in which they asked the majority of questions, most of which were closed in nature, with few examples of topic initiation by patients. A similar pattern to that found in doctor-patient encounters was therefore identified (Heritage & Maynard 2006a, 2006b, ten Have 1989). Patients' attempts to introduce matters related to their lifeworld were ignored or actually blocked by the

prescriber, through the use of a largely biomedical discourse. The primary use of the Voice of Medicine and neglect of the voice of the lifeworld in this manner is interpreted as evidence of asymmetry in the encounter with power and dominance resting with the prescriber (Mishler 1984).

In contrast to Mishler's (1984) findings however, encounters in the current study were conducted in an informal manner, with both parties using each other's first names and everyday language was used at times instead of biomedical discourse, particularly when working with new patients. It was also apparent that, for certain patients, prescribers found it difficult to constrain the patient's lifeworld account. The technical, rational message within biomedical discourse was however always communicated to the patient. Asymmetry within the nurse prescribing consultation therefore appeared to have a more subtle nature than that encountered in the doctor-patient encounter. It is acknowledged however that the analysis in the current study is based on broad patterns of interaction rather than the detailed examination of interaction normally undertaken in this area of research. The interaction patterns were however very clearly discernible in the encounters.

As discussed in Chapter 3, asymmetry of this nature is a central focus of the humanist anti-medicine critique since it is believed to demonstrate the restriction of patients' autonomy by those with powerful social status (Lupton 1997). It serves to disrupt meaning and constrain the patient's contribution to the discussion, resulting in decontextualized information (Mishler 1984). The humanist critique has itself been criticised however for its view of patients as submitting passively to medical power (Mykhalovskiy et al 2004). It is also difficult to assess its relevance to the situation of nurses, since nurses are generally viewed as a powerless and dominated group (Candlin 2000, Fletcher 2006, Harvey & Koteyko 2013, Lupton 2003). The binary nature of power presented within the critique also limits its ability to explain the diffuse form of power and asymmetry found within the nurse prescribing encounter in the current study. The central focus on power within the humanist critique further limits its explanatory potential regarding the use of contrasting discourses of morality, which was evident in the current study. The contrast in such discourses is explored in the following section.

### **7.3 Contrasting moral discourses**

Patients generally emphasised that taking medicines was part of their normal routine and an activity that they normally engaged in without any difficulty. They used a moral discourse to describe a responsible approach to medicines-taking,

justifying any decision to not take medicines as prescribed as rational and reasoned. Several authors (e.g. Donovan & Blake 1992, Horne & Weinman 2004, Stewart & DeMarco 2010) have argued that the decision to not take a prescribed medicine can often be viewed as rational when seen from the patient's perspective. Patients also used a moral discourse to explain the successful management of their condition in the context of their responsibility to manage their everyday lives.

Whilst it was apparent that the patient's condition had a significant impact on physical and emotional well-being, as commonly found in those with a long-term condition (e.g. Mercer 2012, Naylor et al 2012), all of the patients minimised the disruptive effects of their symptoms and emphasised their abilities to carry on with their normal daily activities. A number of patients also demonstrated a moral and responsible approach in their consideration of the needs of friends and relatives, ensuring that their own health needs did not dominate in any close relationship. The demonstration of a moral approach to living with a long-term condition is evident within the literature (Williams 1993) and has been demonstrated in a number of studies involving conditions such as diabetes (Broom & Whittaker 2004), chronic pain (Werner et al 2004) and AIDS (Hassin 1994). Charmaz (1991) also found that patients consistently down-played their illness in interactions with others.

There was some evidence that there were different moral dimensions in patients' experience, which could be competing, reflecting the findings reported by Murdoch et al (2013). Patients in the current study thus emphasised the importance of being able to maintain their normal daily routines and responsibilities and appeared to prioritise such activities over their use of prescribed medicines. Medicines that could be used as part of their daily routine were therefore preferred since they allowed patients to carry on with their usual activities.

The use of a moral discourse by patients contrasted with the discourse used by prescribers in which the approach taken by patients to their health care needs was seen to be a significant issue showing a lack of understanding and engagement. Situations in which patients were using medicines in a way other than prescribed were a source of difficulty and frustration for prescribers and, whilst a non-judgemental approach was used with individual patients in the encounters, discourse focused on patients' inadequate understanding or inappropriate engagement was consistently used within the interviews to explain patient behaviour. McDonald et al (2008) reported similar findings in a qualitative study of practice nurses engaged in the management of patients with a long-term condition

where non-compliant patients (*sic*), who continued to assert the validity of their incorrect views, led to expressions of powerlessness and frustration by nurses.

It could be argued that nurses in the current study were also using a moral discourse, but in a negative sense, which led them to interpret the position of patients who were not fulfilling their sick role obligations (Parsons 1951) as one of individual inadequacy. This discourse led to practice focused largely on patient education and, as previously discussed, it is difficult to judge the extent to which the information provided might enhance patients' use of medicines.

Parsons' (1978) theory, discussed in Chapter 3, offers an explanation of the moral approach shown by patients since, in functional terms, a patient with a long-term condition must continue to fulfil their normal role expectations whilst also meeting the requirements of the sick role (Varul 2010). Emphasis is therefore placed on the need for compliance to their medical treatment and this must be balanced with the demands of their everyday social roles. The frustration demonstrated by nurses is not however predicted by Parsons' theory since it suggests that health professionals should fulfil reciprocal expectations in that they must always act to enhance patient welfare and judge patient behaviour objectively, not in terms of personal value systems (Morgan 2008). In addition, the centrality of medical power and social status within Parsons' theory (Parsons 1951, 1978, Bradby 2012) limits its application to nurse prescribers.

Both the humanist anti-medicine critique and Parsons' theory therefore have limitations as an explanatory framework for the findings from the current study. It is argued that the work of Michel Foucault (Foucault 1980, 1990, O'Farrell 2005, Martin et al 1988) offers greater potential as a critical framework to explain the ways in which the patient's use of medicines is managed within the nurse prescribing encounter. Whilst Foucault's conceptualisation of power as productive and acting in a capillary mechanism throughout all levels has already been outlined in Chapter 3, it is necessary to first examine his later work on governmentality and technologies of the self (section 7.3) to fully justify the explanatory framework (Dean 2010, Martin et al 1988).

It is argued that Foucault's more nuanced view of power (Osborne 1997) can explain the asymmetry evident within the encounters. A number of concepts outlined in his work are used to provide an interpretive framework to explain the ways in which patients' use of medicines are managed within the nurse prescribing encounter and to suggest potential developments in practice which might positively

influence patients' use of medicines. The use of his writings in a selective way is an approach supported by the author:

All my books ... are little tool boxes ... if people want to open them, to use this sentence or that idea as a screwdriver or spanner to short-circuit, discredit or smash systems of power, including eventually those from which my books have emerged ... so much better! (Foucault 1975 cited in McLaren 2009:2)

The concepts used from within Foucault's 'tool box' are examined in section 7.4 below and the explanatory framework is then explored and justified in section 7.5.

#### **7.4 Foucault's 'tool-box' and the interpretive framework**

As discussed in chapter 3 (section 3.5) Foucault described the concept of bio-power to illustrate the many technologies of power that characterised the relationship between the individual and the state (Lupton 1993, McHoul & Grace 1993, O'Farrell 2005, Perron et al 2005). Bio-power involves two axes of power and section 3.5 discussed the anatomo-political axis focused on disciplinary power which operates through technologies or techniques such as surveillance, the disciplinary gaze, measurement and normalisation. Such technologies are used to ensure that individual behaviour is controlled, performance is improved and the individual is made to be maximally useful to society. Whilst Foucault's conception of disciplinary power remains an important area of his *œuvre* and is relevant to the current study (O'Farrell 2005, Turner 1997), later phases of Foucault's work need to be considered to fully explain the study's findings.

Foucault (1990) developed the concept of the bio-political axis of power through which life, death and the health of entire populations are managed through technologies based on the discourses relating to hygiene, public health and sexuality (O'Farrell 2005). In addition, the concept of governmentality, a term he first used in 1978 (O'Farrell 2005) was developed to explain the complexity of power relations involved in society's governance. Whilst Foucault did not outline his ideas fully prior to his death, his work has been developed by others to provide a comprehensive account of the concept (Kendall & Wickham 2004). Governmentality is focused on Foucault's basic notion of government as the 'conduct of conduct' and therefore:

'is any more or less calculated and rational activity, undertaken by a multiplicity of authorities and agencies, employing a variety of techniques and

forms of knowledge, that seeks to shape conduct by working through the desires, aspirations and beliefs of various actors' (Dean 2010:18)

It involves three forms of power including sovereignty, discipline and government, which involve domination, disciplinary power and government of others and the self respectively (Holmes & Gastaldo 2002). Several authors (e.g. Bunton & Petersen 1997, Petersen 1997, Turner 1997) suggest that governmentality provides an opportunity to examine the interface between technologies of the self, which allow self-regulation and technologies of domination which involve societal regulation. Other authors (e.g. Holmes & Gastaldo 2002, Perron et al 2005, Thompson 2008) suggest that nurses should recognise and acknowledge the significance of their role in governmentality, which could be 'a valuable tool in deconstructing nursing as an apolitical practice and a powerless profession' (Holmes & Gastaldo 2002: 564). Analysis of such issues is not undertaken here as they are not central to the study's research question. However the concepts of pastoral power and technologies of the self, developed within Foucault's work on governmentality, are examined in relation to their role within the processes involved in managing the patient's use of medicines.

The following sections consider the operation of power, in Foucauldian terms, at the level of the individual through disciplinary and pastoral power (7.3.1). Subsequently the ways in which conduct can be governed at levels beyond the individual through the bio-political axis of power are examined (7.3.2) although the analysis is mostly focused on the way in which such techniques of power operate at the individual level. Foucault's conception of local, naïve knowledge is also reviewed to illustrate the potential subjugation of patients' knowledge and resistance that may develop (section 7.3.3). The concept of technologies of the self is examined in section 7.3.4 to illustrate ways in which a Foucauldian analysis can allow potential for change. All of the concepts selected from Foucault's toolbox are then examined in relation to the findings obtained in this study in section 7.4.

#### 7.4.1 Disciplinary and pastoral power at the individual level

In modern societies medicine is an important part of the disciplinary regime (Elden 2007). Disciplinary power in medicine arises, not from power and status as suggested by the medicalisation critique, but from medical knowledge and practice which have, over time, come to define the ways in which the body is understood and also experienced within medical discourse (Foucault 1977). Doctors therefore have the ability to observe and know the human body via the clinical gaze, examine it, perform measurements and then make a comparison against established norms

(Lupton 1997). Their power is not normally exercised through means of domination but instead 'seeks to persuade its subjects that certain ways of thinking and behaving are appropriate for them' (Lupton 1997:99) thus facilitating the development of docile bodies. Since, in Foucauldian terms, power is not possessed but operates in relational terms throughout all social groups, patients are complicit in the resulting asymmetry in power relations, raising difficulties for initiatives or policy guidelines focused on patient empowerment (Lupton 1997).

Pastoral power is frequently used at the same time as disciplinary power to govern the individual body and the boundaries between the two forms of power can be blurred, particularly in nursing practice (Holmes & Gastaldo 2002). Pastoral power is a benevolent and individualizing form of power (Dean 2010), explained using the metaphor of a shepherd caring for his flock. Care of this nature, provided for every member of ancient societies, was adopted and institutionalised by the early European Christian Church and later by the secular world (O' Farrell 2005) with an accompanying change in its purpose from salvation in the after-life to the achievement of societal goals such as health, well-being and security (McCuaig et al 2013, Nettleton 1997).

The operation of pastoral power, which is integral to specialist discourses such as medicine, psychology and nursing, requires an individual to act as a caring guide for another, whilst working to achieve goals desired by the state (Perron et al 2005). The guide must develop an in-depth knowledge of the individual through the pastoral use of techniques such as confession and self-examination and, in turn, the patient must be prepared to trust the guide and share even intimate details of their lives (Holmes & Gastaldo 2002, Wilson 2001). The combination of trust and obedience together with confession means that the practices of pastoral power form a powerful combination in governing individuals and populations since resistance is difficult in a caring context (McCuaig et al 2013, Holmes & Gastaldo 2002). Pastoral power is a particular characteristic of the operation of power in the Western world (O'Farrell 2005).

#### 7.4.2 The bio-political axis of power: Managing the population

Foucault (1990) highlights the role of interventions and regulations involved in the management of populations within the bio-political pole of bio-power, which involves a 'subtle, constant and ubiquitous power over life (Gastaldo 1997: 115). The expansion of health care processes into all areas of patients' lives and measurement of groups and populations represent invisible power techniques

designed to gather information and determine what is normal. Government policies are a visible strategy through which the health of the population is managed and the bio-political axis of power is usually explored in the context of public health practice (Petersen & Lupton 1996, Lupton 1997).

Government public health policies relating to the management of the increasing proportion of the population with one or more long-term conditions have been examined in section 2.2 and have a particular focus on the prevention or amelioration of any adverse long-term consequences. The policies are characterised by an emphasis on the active participation of patients in all aspects of their care to ensure better outcomes and enable 'empowered' patients (e.g. Coulter & Collins 2011, DoH 2012, Greene & Hibbard 2012). In Foucauldian terms however the policies also serve to enhance professional and state control of patients (Lupton 1997, Wilson 2001) since public health is a discipline with a broad definition which encompasses many areas of an individual's personal life, including social, physical and psychological elements. It therefore represents an 'expanding web of knowledge and power' (Petersen & Lupton 1996: 6). In addition, the presence of a healthy body increasingly forms part of judgements made about an individual's moral worth (Bunton et al 1995, Crawford 2006, Leontowitsch et al 2010, Lupton 1995).

Moral judgements about patients are also emphasised through the availability and provision of health information. Although educating patients about their health allows them to be self-governing in relation to their condition, it can also lead to the subjugation of patients since it involves the imposition of contemporary discourses of health and extends professional surveillance to all areas of the patients' lives (Gastaldo 1997). In such ways, behaviour in accordance with dominant health discourses becomes a moral obligation (Petersen & Lupton 1996). Subjugation of patients' knowledge is explored further below.

#### 7.4.3 Subjugated knowledge and resistance

Foucault's conception of the relationship between discourse and knowledge has already been outlined (section 3.6). The importance he attributes to the examination of the ways that discourses can be contested and modified within local practices was also highlighted since Foucault rejected the idea that any discourse should be seen as totalitarian and therefore not possible to criticise or resist. In contrast Foucault (1977) suggests resistance is a consistent feature within power relations and his work often focused on the resistances associated with dominant discourses

(Hamilton & Manias 2009). Foucault (1980c:81) explored the role of 'naïve local knowledge' which becomes subjugated within the dominant discourse. The '*insurrection of subjugated knowledges*' (Foucault 1980c:82, *emphasis in original*) is central to the development of criticism and resistance in that:

‘..it is through the re-emergence of these low-ranking knowledges, these unqualified, even directly disqualified knowledges (such as that of the psychiatric patient, of the ill person, of the nurse, the doctor- parallel and marginal as they are to the knowledge of medicine- that of the delinquent etc.), and which involve what I would call a popular knowledge...which owes its force only to the harshness with which it is opposed by everything surrounding it- that it is through the re-appearance of this knowledge, of these local popular knowledges, these disqualified knowledges, that criticism performs its work (Foucault 1980c:82).

Subjugation of local naïve knowledges serves to emphasise the dominant discourse and prevents the development of new knowledge and discourses, which are essential in establishing resistance and enabling change. It is important to note that resistance does not however mean that the operation of power can be avoided. Instead, resistance to power usually creates power in a new form in that "power can retreat here, re-organize its forces, invest itself elsewhere ... and so the battle continues" (Foucault 1980e:56).

The human subject is thus continuously exposed to the operation of power and Foucault's work can be criticised for his neglect of individual agency (Lupton 1997, Pylypa 1998, Ramazonoğlu 1993). He turned however to themes of agency and ethics in his later work on technologies or practices of the self (Foucault 1988), work that Lupton (1995) suggests may be valuable in examining the response of patients to the healthcare encounter since it allows examination of the relationship between institutional and localised operations of power. Foucault's work in this area is examined in the following section.

#### 7.4.4 Technologies of the self: allowing potential for change

Foucault (1988) described four types of technologies that reflect a particular type of domination through different forms of training and modification of individuals in order to develop required skills and attitudes. The technologies do not generally function separately. Technologies of production and sign systems are used to study the sciences and linguistics whilst technologies of power or domination of others and technologies of the self are focused on the human subject.

Technologies of the self can be defined as a type of technologies that:

'permit individuals to affect by their own means or with the help of others a certain number of operations on their own bodies and souls, thoughts, conduct and way of being, so as to transform themselves in order to attain a certain state of happiness, purity, wisdom, perfection or immortality' (Foucault 1988b:18)

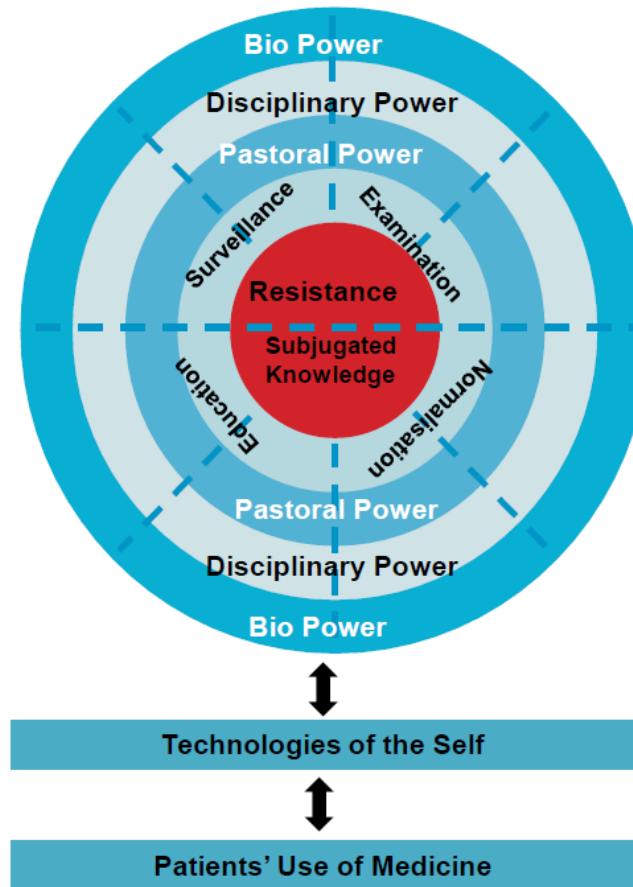
Foucault's analysis of technologies of the self initially focused on the practices of the self in Early Greece in which there was a concern for care for the self, in order to prepare for public life. Care for the self was a deliberate effort to construct an ethical self and involved contemplation on the details of daily activities, thoughts, moods and reading with the guidance of a mentor (Pylypa 1998). In Greco-Roman times an additional concern for knowing oneself developed and this concern dominated in the early Christian period when technologies of the self were focused on ensuring obedience to God through confession of personal weaknesses to a priest and rituals of self-denial (Foucault 1988b, Pylypa 1998). Technologies of the self in Western societies are now characterised by the '*reflexive project*' of the self (Giddens, 1991:32, emphasis in original) since the uncertainty characteristic of modern societies and the decline of traditional technologies such as the Church, workplace and family means that self-identity must be created through reflexivity (Bakardjieva & Gaden 2011, Giddens 1991, Pylypa 1998). In contrast to earlier societies where mentors or priests acted as guides in enabling technologies of the self, professionals such as doctors, counsellors and therapists are often called upon to act as guides for this process (Silverman 1987).

The potential application of Foucault's conceptualisations of power, resistance and technologies of the self are related to the findings of the current study in section 7.5 below.

## **7.5 Managing patients' use of medicines: the operation of power within the patient-nurse prescriber encounter**

The explanatory framework developed through this analysis is illustrated below in figure 7.2:

Figure 7.2: Managing patients' use of medicines: the operation of power



### 7.5.1 Disciplinary and pastoral power

Several aspects of the current study can be interpreted through Foucault's conception of disciplinary power (Foucault 1977).

There was evidence of prescribers' use of a predominantly medical discourse together with the other techniques of disciplinary power including surveillance, measurement and normalisation of the patient (Lupton 1997). Surveillance within the encounter involved an in-depth review and examination of the patient's physical status and the nature of any recent change. This was mostly verbal in nature since very few physical examinations were conducted. Patient surveillance however also extended to the patient's home environment through the electronic transfer to the

prescriber of, for example, blood glucose results or respiratory measurements conducted at home. There was also extensive reference to physiological and biochemical indicators of the patient's condition obtained through a range of measures including, for example, lung function tests, blood tests and measures obtained within renal dialysis sessions. The different tests were always discussed with the patient in relation to the normative expectations of the results and the extent to which those of the patient deviated from the expected norm. Disciplinary techniques of this nature allow individuals to be categorised to identify those who are not conforming to the expectations held within the dominant discourse (Perron et al 2005) and there was evidence of this within the current study.

Whilst the disciplinary power demonstrated by the prescribers could arise from the biomedical knowledge developed through their prescribing qualification and their extensive experience as a nurse, it is however suggested that all nurses exercise disciplinary power since they employ expert discourses and, through a number of activities aimed at individual or population control, contribute to the regulation of society (Bradbury-Jones et al 2008, Gastaldo and Holmes 1999, Holmes 2001, Holmes & Gastaldo 2002, Perron et al 2005, Thompson 2008). There has however been little exploration of society's views and assumptions regarding the nurse prescribing role and the extent to which there are any differences relative to the role of nurses in general. Further in-depth examination of the discourses surrounding nurse prescribing in government, policy and research papers would be helpful in illustrating society's view of the position of nurse prescribers.

There was evidence of pastoral power within the current study, particularly when the relationship between prescriber and patient was long-term. All of the patients valued their relationship with the prescriber highly, with many referring to its caring nature and the positive impact the relationship had on their everyday lives. Prescribers also demonstrated an in-depth understanding of the patients and their home circumstances although, as previously noted, discussion of patients' needs related to their physical condition only in most encounters. It is possible however that use of the techniques of pastoral power was missed due to the observation of only one encounter in the current study, further emphasising the importance of studying successive nurse prescribing consultations (Courtenay et al 2009a).

In summary this section has illustrated the operation of disciplinary and pastoral power in relation to the patients' use of medicines. The consideration does not however fully explain other findings within the study such as the emphasis on

patient education that was evident for all prescribers and the moral approach shown by patients. Such issues are explored in the following section and the extent to which contemporary discourses of the self-management of long-term conditions were emphasised is explored.

### 7.5.2 Bio-political axis of power

Whilst the bio-political axis of power is usually explored in the context of public health practice (Petersen & Lupton 1996, Lupton 1997) as previously discussed, it is explored here since it appeared to underpin the emphasis on patient education found within all encounters and the moral approach demonstrated by patients (Gastaldo 1997).

All prescribers in the current study demonstrated frequent use of the discourse of active self-management, emphasising the importance of patients being fully involved in the management of their condition and thus reflecting the discourse evident within contemporary policies regarding the management of long-term conditions (see section 2.2). This discourse underpinned the frequent attempts to educate patients about the most appropriate biomedical, evidence-based strategies to manage their condition effectively even when such information was not solicited or there was minimal response to the information provided. Those patients who found it difficult to follow the health education provided led to a feeling of frustration and powerlessness amongst prescribers, perhaps due to the strength of their identification with the discourse.

The engagement of patients in the current study with the contemporary public health discourse of active self-management was also evident in their frequent references to their moral responsibility for management of their condition and their everyday lives, reflecting the public health discourse used by patients in Mykhalovskiy et al's (2004) study. In common with other studies of patients with a long-term condition, participants consistently emphasised their ability to continue with their everyday responsibilities even when also highlighting the significant impact of their condition (Broom & Whittaker 2004, Charmaz 1991, Hassin 1994, Mercer 2012, Naylor et al 2012, Werner et al 2004, Williams 1993). However patients in the current study appeared to prioritise managing their everyday lives over their condition whenever the respective responsibilities were in conflict.

The value placed by patients on being seen as moral and responsible appeared to be unrecognised by prescribers in the current study, particularly the importance

patients placed on living everyday life responsibly. Patient assertions of their moral approach were frequently ignored or interrupted with questions or information reflecting the dominant discourse and their perspective was not therefore considered. In a Foucauldian sense this apparent rejection of patients' sense of their own moral worth, together with the frequent interruption of their accounts of everyday experiences as previously reported (see chapter 5), meant that patients' knowledge was subjugated and resistance was demonstrated by patients. The nature of these concepts is explored below together with their potential consequences for patients' use of medicines.

### 7.5.3 Subjugated knowledge and resistance

In the current study the local knowledge offered by patients appeared to be disqualified by prescribers since it was either ignored or used as an opportunity to raise a question or statement framed within the dominant biomedical discourse. As explored in section 7.3.3, subjugation of this nature, whilst it serves to emphasise the dominant discourse, actually prevents the development of new discourses. The development of new discourses regarding patients' use of medicines may allow more effective ways of working with patients.

Patient resistance was also evident within the encounters. Patients usually showed a silent response to the prescriber's advice about their medicines or condition or tried to assert their expertise in this area, stressing that they already knew the information shared. In each situation the extent to which the health information provided by the prescriber was received by the patient was unclear although in a small number of encounters there was a more direct challenge to the information provided by the prescriber suggesting that the information was actively resisted. There was also evidence that the medicines prescribed during the encounter were generally not used by the patient. Similar resistance to a health care intervention was demonstrated in Bloor and McIntosh's (1990) study of new mothers receiving a home visit from a health visitor in which mothers demonstrated direct rejection of the advice offered or responded through silence, avoidance, non-co-operation and concealment of their rejection of the advice given.

As previously noted (section 7.3.3) resistance of this nature does not mean that the patient escapes the operation of power, which critics of Foucault suggest means that individual agency is further constrained (Lupton 1997). The concept of resistance was not however particularly well developed within Foucault's work and

Lupton (1997) suggests that further empirical examination of the ways in which individuals respond to disciplinary practices is required. The current study illustrates patients' responses to a limited extent although further exploration of the operation of disciplinary power and patient resistance within the prescribing encounter is required. Lupton (1997) further suggests that Foucault's work on technologies of the self may be valuable in examining the response of patients to the healthcare encounter since it allows examination of the relationship between institutional and localised operations of power (Lupton 1995). The potential application of Foucault's work in this area is examined in the following section.

#### 7.5.4 Technologies of the self and patients' use of medicines

Foucault's conception of 'technologies of the self' is focused on personal change through reflexivity on the part of the patient, supported by a caring guide (Foucault 1988b). Enhancing patients' use of medicines through technologies of the self which involve a reflexive process would therefore require prescribers to engage with patients' beliefs, thoughts and emotions in a more active manner than observed within the current study. McCabe & Holmes (2009) examined the ways in which researchers might employ technologies of the self in achieving the transformation and emancipation of participants sought within research conducted within the critical tradition. The researcher, they suggested, acts as the caring agent, employing pastoral power (section 7.4.1), to act as a guide to facilitate the participant's search for self-knowledge through reflexivity. The research interaction must enable participants to recognise the dominant discourses that operate within their situation and encourage them to seek knowledge of themselves rather than judgement. Technologies of the self are thus activated to enable the transformation of participants through 'acting on their own psyches, thoughts and conduct' (McCabe & Holmes 2009: 1523). Researchers also need to be reflexive regarding the power which is inherent in their role as guide, acknowledging that the research interview can act in a repressive manner rather than liberating in the way they intend (McCabe & Homes 2009).

There are many parallels that can be drawn with the position of the critical researcher if McCabe & Holmes' (2009) arguments about use of technologies of the self are applied to the role of the prescriber in facilitating patients' use of medicines. Both need to seek transformation through enabling reflexivity, allowing greater recognition of the dominant discourses operating within the individual's situation. Recognition of the dominant discourses must be supported, in turn, to stimulate

technologies of the self to achieve an appropriate way of acting, namely emancipation in the case of critical research and the appropriate use of medicines in the context of the current study.

The current study has demonstrated the nature of the relationship between patients with long-term condition and the nurse prescriber which is frequently long-term and highly valued by patients. Such a relationship allows the sharing of personal and intimate details which is necessary to enable technologies of the self (Foucault 1988b, Lupton 1996). It is important however to recognise the time constraints that most prescribers reported as an issue which constrains their practice. The expanded reflexivity that is recommended to facilitate technologies of the self (McCabe & Holmes 2009) is unlikely to be achieved in the time available for most prescribing consultations. An approach of this nature is also likely to require prescribers to have a greater understanding of concepts and theories derived from the social sciences literature (Holmes & Gastaldo 2002). Lupton (1997) also points out that there is little empirical research focused on the ways in which patients respond to, manage and perhaps contest medical discourses and the operation of power techniques in the context of their everyday lives. The current study has indicated that patients appear to place a greater emphasis on their everyday responsibilities which sometimes led to resistance to medical advice. Further research in this area is indicated.

The practical application of Foucault's conception of technologies of the self therefore requires further consideration and investigation to illustrate its potential in enhancing patients' use of medicines. The current study has however shown the relevance of Foucault's writings (Foucault 1970, 1980a, 1980b, 1980c, 1980d, 1980e, 1988) as an explanatory framework in relation to the asymmetry, resistance and contrasting moral discourses found within the patient-nurse prescriber encounter. Further examination of this area of his œuvre is therefore warranted. The nature and scale of patients' sub-optimal use of medicines and the continuing difficulties found in its management, explored earlier in chapter 2, would suggest that all approaches which have potential merit require investigation. Further recommendations for future research, practice and education in this area are examined in section 7.7 below. The study's contribution to knowledge and understanding is first explored.

## 7.6 Contribution of the study to knowledge and understanding

This study has enabled an in-depth analysis of the encounter between patients with a long-term condition and nurse prescribers illustrating the practices evident in the management of patients' use of medicines. Limitations in prescribing practice were evident at times in terms of the information shared with patients about medicines and the forms of support available to enable their appropriate use and prescribers did not always follow current guidelines in such areas. Thus far there has been limited literature that examines the encounter in terms of the management of patients' use of medicines and the study therefore contributes to the evidence base for non-medical prescribing, a growing and increasingly important area of health care practice.

The analysis exposed the asymmetry and operation of power that characterised the encounter, providing evidence that patient encounters with nurse prescribers share the same characteristics as those with doctors. The asymmetry demonstrated was similar to that shown in earlier studies of patient encounters with nurses (Candlin 2000) in that it demonstrated a more subtle manifestation than is found in medical encounters. The effects of the asymmetry were however similar to those associated with doctor-patient encounters in that patients were prevented from sharing their perspective and were not fully engaged in decision-making. Power relations within the nurse prescribing encounter have received little research attention to date and the current study therefore emphasises the importance of further research in this area to enable a comprehensive and systematic examination of the operation of power and its impact on the role of nurse prescribers in supporting patients' use of medicines.

The study has shown the potential explanatory value of Foucault's conceptualisations of power, subjugated knowledge and resistance (Foucault 1980c, 1980d, 1988) (figure 7.1). Foucault's writings offer a rich and multifaceted framework to enable further explication of the complexities of the prescribing encounter. His work provides an opportunity to develop a different perspective on matters such as the asymmetry in the health care encounter and patients' use of medicines, issues which have generated considerable research but which remain difficult areas in practice. The study therefore provides support for an alternative explanatory framework to the functional and anti-medicine critiques that are commonly used to explore asymmetry within the encounter. Foucault's writings, for example, appear able to explain the asymmetry which continues to be found within

the medical encounter despite the current emphasis on communication skills training and shared decision-making identified by Pilnick & Dingwall (2011). They may also allow greater potential for change than the functionalist perspective proposed by the authors.

Foucault's conception of technologies of the self (Foucault 1986) is proposed as a potential way of enhancing patients' use of medicines although the pragmatic difficulties that may be involved in achieving the necessary reflexivity within current practice constraints are acknowledged. The study has however highlighted further areas of research to enable a more robust assessment of the value of technologies of the self in enhancing patients' use of medicines which are explored in the following section.

In summary the study has enabled a deeper understanding of the ways in which the patients' use of medicines is managed within the prescribing encounter and the assumptions, beliefs and processes underpinning such management. It has illustrated the operation of power within the patient-nurse prescriber encounter, drawing on the writings of Michel Foucault as an explanatory framework. It was suggested in section 4.6.1 that the size and composition of the sample involved in the study meant that a certain degree of caution was necessary when considering the relevance of the findings. The self-selection of prescribers and their role in selecting patient participants also suggests that caution is necessary. However all participants were recruited within specific inclusion criteria and there were no clear patterns of difference within the sample to those recruited to other studies in this area. All participants had relevant experiences and were therefore eligible to be included within the purposive sample.

It is acknowledged too that my inexperience in the qualitative research field may also mean that a cautious approach is required in interpreting the significance of the study's findings. Challenges encountered by novice researchers commonly include coding, categorisation and over-interpretation of data (Li & Seale 2007). A number of strategies were however used to ensure that such challenges did not impact on data collection and analysis including robust research methods training within the doctoral programme and monthly supervision sessions with two highly experienced qualitative researchers to enable a comprehensive critical review of the processes of data collection and analysis.

It should also be noted that, although using a generic approach to discourse analysis, the good scholarship emphasised by many authors (Cheek 2004, Lather

2006, Becker 2007) was sought through a number of measures. These included the presentation of a clear rationale for the use of a generic approach and for the meaning attributed to discourse. The approaches used in data collection and analysis were also explained fully and an explicit framework was used to ensure the rigour of the study (Nixon & Power 2007) in which quality considerations were addressed through all phases of the study. It is therefore argued that the study's findings can be used to make a number of recommendations for research, practice and education which are explored in section 7.7 below.

## **7.7 Recommendations for research, practice and education**

This section presents a number of recommendations for research, practice and education. Although the recommendations are presented separately it is important to note that, whilst there is a growing evidence base for prescribing by practitioners other than medical doctors, the regular changes to the nature and extent of the role and the existence of only a small number of studies involving an in-depth exploration of the prescribing encounter means that the complexities of the non-medical prescribing encounter remain relatively unexplored. It is therefore acknowledged that additional systematic investigation is also required to ensure that the recommendations for practice and education are robust and implemented effectively and some issues are therefore discussed in each section.

### **7.7.1 Recommendations for research**

The following recommendations focus on research studies required to both examine the application of Foucault's writings in relation to non-medical prescribing and patients' use of medicines and in relation to practice in this area.

It is important however to first emphasise that any research must be conducted from the perspective of pharmacist and allied health professional prescribers as well as nurses. There can therefore be clear empirical evidence about the extent to which the different non-medical disciplines permitted to prescribe are able to support patients' use of medicines rather than the assumptions that frequently characterise the literature. The different traditions and cultural expectations regarding each professional role may also have an influence on the operation of power within each discipline's encounters. Research focused on the prescribing encounter and patients' use of medicines must also be conducted over several

encounters since the generally long-term nature of the relationship between prescriber and patient means that an incomplete picture is gained by observing one encounter only. With these caveats in mind the following areas of research are proposed:

1. Further research, drawing on Foucault's work, is required to illustrate patients' experience of the operations of power within the encounter, including the ways in which it is managed and perhaps resisted. Such work will enable greater understanding of the nature and possible significance of the asymmetry that was apparent within the encounter.
2. Empirical study of the potential application of Foucault's conception of technologies of the self is essential to enable assessment of its nature and value in practice. The findings can then, in turn, inform any necessary developments in education and practice. It is likely that further development of practitioners' understanding of concepts derived from the social sciences literature is required to enable their understanding of Foucault's work (Holmes & Gastaldo 2002).
3. Analysis of the macro-level discourses evident in policy and research literature that pertains to each non-medical prescribing role would also be valuable in understanding the complexities and constraints affecting each role. Such an analysis would allow the many aspects of Foucault's writings to be fully explored in the context of non-medical prescribing.
4. Further research is necessary to examine factors influencing the ability of non-medical prescribers to follow recommended guidelines in areas such as medication review and practical strategies to facilitate patients' use of medicines.
5. Further study of the ways in which the strategies used to inform patients about their medicines and communication with the patient's general practitioner might be enhanced is also required.

#### 7.7.2 Recommendations for practice

The study suggested that there are several ways in which the practice of nurse prescribers can be developed to ensure it is in accordance with national guidelines relating to patients' use of medicines. It is however important to emphasise that, as discussed by Cribb (2011), any recommendations for prescribing practice must be considered in association with the need to ensure a strategic approach and managerial support at the local level to ensure that the required developments can

take place. The time available for their role was a significant concern for most prescribers in the current study and practice in relation to the use of medicines by patients is unlikely to be advanced if this issue is not managed effectively.

The following recommendations therefore involve change to the practice of individual prescribers but are also areas in which a clear strategic direction is required which, at times may require effective collaboration between secondary and primary health care services. The recent policy agenda of medicines optimisation (e.g. RPS 2013b) is focused many of the issues recommendations below and therefore provides explicit and helpful guidance to organisations:

1. The ways in which medication reviews are managed within the encounter to ensure that this also considers the patients' use of medicines and any side effects they might be experiencing.
2. Strategies should be used to enhance patients' use of medicines in addition to the provision of verbal information and the use of multi-compartment compliance aids. Prescribers referred to the importance of considering the patient's home circumstances within the interviews and strategies to enable this through, for example greater collaboration with community nursing teams should be explored. Patients also referred to the need for greater information and their use of medicine lists and these resources could be developed by health care organisations.
3. Strategies to educate patients effectively about their medicines whilst building on their existing knowledge and expertise should be explored.
4. Approaches to effective communication between the hospital and General Practitioner about a patient's medicines to ensure that any changes implemented in the out-patient setting are continued in primary care.

#### 7.7.3 Recommendations for education

Implementing all of the above recommendations will require additional education for practitioners, both in their initial development as prescribers and in their on-going prescribing practice. Existing prescribers will require continuing professional development opportunities to develop their understanding and skills of the issues outlined above. A strategic approach at local level is again required since there is considerable evidence in the non-medical prescribing literature that access to such opportunities is a major concern for prescribers (e.g. Courtenay & Gordon 2009, Hacking & Taylor 2010, Latter et al 2011).

The initial preparation programme for non-medical prescribing, whilst generally believed to be fit-for-purpose (Latter et al 2011), is often described as demanding and difficult for students and challenging for higher education staff as they seek to meet the differing educational needs of the range of disciplines within the student group (Hacking & Taylor 2010, Latter et al 2011). There are therefore likely to be several barriers to the inclusion of further curriculum content since the requirements of the regulatory bodies that accredit the programme are already perceived to be demanding (Latter et al 2011).

It is however essential that higher education institutions ensure that they prepare student prescribers to work effectively with patients in relation to their use of medicines through the development of appropriate communication skills together with knowledge and understanding of effective approaches in facilitating patient education and understanding. Greater awareness of the range of practical mechanisms that can support medicines' use is also required. It is likely that the incorporation of all such elements together with the development of necessary skills will require effective negotiation and collaboration with educational commissioners to enable appropriate support for the developed curriculum which is likely to involve additional time. Discussion and partnership with the different regulatory authorities is also required to ensure that the standards and outcomes they require allow appropriate consideration of the knowledge and skills necessary to support patients' use of medicines.

## **7.8 Concluding remarks**

Patients' sub-optimal use of medicines is a major issue of world-wide significance leading to major costs at individual, health service and societal levels. There is a significant body of research relating to the patients' use of medicines and many suggested strategies through which this can be enhanced. It is a very complex field with several different conceptualisations of the issue and mixed evidence regarding the effectiveness of different interventions. This study sought to investigate the ways in which the use of medicines by patients with a long-term condition were managed within their encounters with nurse prescribers, a growing sector of the health care workforce, who are able to manage the patient's condition independently including the prescription of any medicines. Interest in this area was stimulated initially by the response of non-medical prescribing students to any discussion of the power differential between patients and medical prescribers. The

firmly-expressed consensus view was that none of the professional disciplines represented in the group (nurses, pharmacists and physiotherapists) possessed the same power and status as doctors. This response was strongest within the nurse prescribing students.

Power within the prescribing encounter was however found to be a consistent focus within the literature and the results from the current study also showed asymmetry within the encounters between patients and nurse prescribers. The asymmetry meant that there was a lack of recognition of the patients' perspective within the encounter and patients were not able to contribute to decision-making. Analysis of the study's findings was undertaken using the writings of Michel Foucault as an interpretive framework showing that power is not necessarily repressive but can be productive. There is therefore potential to enhance patients' use of medicines through the operation of pastoral power, which is benevolent and individualising in nature and technologies of the self through which patients can be supported and guided in their quest for health and well-being.

Nurse prescribers could play a prominent role in enabling patients' use of medicines since the positive relationship they have with patients is evidence of pastoral power. The relationship, which is highly valued by patients, also provides a good foundation for the reflexivity that must be facilitated to enable patients' use of technologies of the self. Nurse prescribers however need to be able to understand and embrace alternative conceptions of power to the traditional juridico-liberal, repressive form to fulfil the potential within their role. Greater understanding will enable nurse prescribers to avoid their almost automatic rejection of any consideration of power that is associated with their discipline. They should, instead, acknowledge power and recognise its ability to achieve productive change. In such ways they can reject the view that they are a powerless and dominated group and instead recognise the potential within their expanded, skilled and responsible role, to positively influence patients' use of medicines.

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## **Appendix 1: Communication with Trust Non-Medical Prescribing Leads**

- **Introductory email**
- **Summary proposal for NMP Leads**
- **Role of Non-Medical Prescribing Lead**

**Introductory email**

Dear Non-Medical Prescribing Lead

I am currently studying for a Doctorate in Health Research with the Centre for Research in Primary and Community Care at the University of Hertfordshire. As part of that award I will be carrying out a study examining the role of nurse and pharmacist prescribers in enabling patients with a long-term condition to take their medicines in the way intended by the prescriber. As you will be aware, there are many issues with patients' use of medicines, which involve significant individual, NHS and societal costs.

I would like to invite expressions of interest from you in enabling my access to nurse and pharmacist prescribers in your local area who take responsibility for patients with a long-term condition. This is to ascertain initial interest in the study only and would not represent consent on your part, or that of your prescribers, to be involved in the study. Expressions of Interest would however enable me to complete the necessary ethics and research governance approvals, following which I would seek formal consent from you and the individual prescribers, with the provision of comprehensive information.

I am pleased to attach a concise summary of the study. If you are interested in enabling my access to prescribers in your area, I would be very grateful if you can contact me, as outlined below. If you would like further information or have any points for discussion, please do not hesitate to get in touch. You may prefer to contact one of my research supervisors, Professor Hilary Thomas and Professor Sally Kendall, whose contact details are also listed below.

With best wishes

Denise Knight

Non-Medical Prescribing Lead, University of Hertfordshire

Tel: 07811 024722

Email: [d.knight@herts.ac.uk](mailto:d.knight@herts.ac.uk)

Hilary Thomas

Email: [h.a.thomas@herts.ac.uk](mailto:h.a.thomas@herts.ac.uk)

Sally Kendall

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## **Summary proposal**

### **Encounters between patients with long-term conditions and nurse and pharmacist prescribers: a qualitative analysis**

#### **Background**

Prescribed medication is the most common strategy used in the treatment of many long-term conditions although it is widely recognised that approximately half of all medicines are not taken in the way that the prescriber intended, leading to considerable costs for the individual, the NHS and society<sup>1</sup>. Whilst there is a significant body of research in this area<sup>1</sup> there is little consistent evidence regarding the effectiveness of different interventions in enhancing patients' use of medicines<sup>2</sup>. Current policy emphasises the empowerment of patients to take their medicines as prescribed through a partnership with the prescriber that takes account of their beliefs, enables informed use of medicines and provides practical support with medicines usage<sup>3</sup>.

Non-medical prescribers such as nurses and pharmacists now play an increasingly important role in the management of patients with long-term conditions and can make a significant contribution to the achievement of national and local service priorities and quality standards by improving patients' access to services, reducing drug wastage and preventing avoidable admissions<sup>4</sup>. Whilst it is known that patients value the consultation style and approach of nurse and pharmacist prescribers<sup>5</sup>, there is minimal research that addresses the complexities of the non-medical prescribing encounter<sup>6</sup> or the ways in which the patient's use of medicines is understood or managed. In addition, most of the research conducted focuses on nurse prescribers, despite the emerging role of pharmacists in a range of initiatives focused on the effective management of patients with long-term conditions<sup>7</sup>.

#### **Aim of study:**

1. To undertake an in-depth qualitative analysis of the understandings of medicines use held by patients and nurse/pharmacist prescribers.
2. To examine the nature of the discussion about a patient's use of medicines that occurs within a prescribing consultation.

#### **Objectives:**

To collect detailed data regarding the consultation process between patients and nurse/pharmacist prescribers.

To examine patient and nurse/pharmacist prescribers' views of the factors influencing patients' use of medicines

To understand patient and nurse/pharmacist prescribers' views of the ways in which patients' medicines use can be enhanced.

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<sup>1</sup> This area is commonly referred to as patients' compliance or adherence to their prescribed medication <sup>3</sup>. The term patients' use of medicines is used within this study since it avoids the paternalistic assumptions associated with the previous terms<sup>4</sup>.

To explore the supports and constraints experienced by patients and prescribers in practice relating to patients' use of medicines.

### **Research design & methods:**

An in-depth qualitative study is proposed, involving 3 independent nurse prescribers and 3 independent pharmacist prescribers, responsible for the management of patients with a long-term condition<sup>2</sup>, together with a sample of their patients. There will be 2 phases:

Phase 1: Non-participant observation of nurse and pharmacist prescribing consultations with patients with a long-term condition. Consultations will be audiotaped and detailed field notes will be made to record e.g. context, non-verbal behaviours. Observations will take place in the venue normally used by the prescriber such as a clinic or surgery setting. Three consultations per prescriber will be observed i.e. 18 consultations in total.

Phase 2: In-depth, semi-structured interviews with the patients and prescribers involved in Phase 1.

### **Participants:**

A purposive sampling approach will be used to recruit nurse/pharmacist prescribers who are responsible for caring for patients with long-term conditions in either primary or secondary care settings. An information sheet about the study will initially be distributed to the prescribers through non-medical prescribing leads in the regional health authority. Prescribers agreeing to participate will distribute information sheets to patients they see regularly in practice. Those patients willing to participate in the study will contact the researcher. Once patient consent is achieved, the prescriber will agree a mutually convenient time, for the initial observation to take place. Interviews will then be negotiated with the prescriber and the patient, taking place at their convenience.

### **Ethical and research governance approval:**

The study will be conducted according to the standards and codes required by the National Research Ethics Service and will be subject to full ethical and research governance approval.

### **Outcomes/benefits of study:**

The study will enable an in-depth understanding of this important area of prescribing practice and will contribute to the theoretical literature concerning patient's use of prescribed medication and ways in which this can be supported. It will inform and improve the practice of nurse and pharmacist prescribers, enabling them to work effectively to improve the lives of those with long term conditions and supporting the achievement of national and local strategies such as 'Towards the best, together'<sup>4,7,8</sup>.

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<sup>2</sup> The nature of the long term conditions included within the study will be determined by the specialist area of practice of those prescribers agreeing to participate in the study.

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**Role of non-medical prescribing lead**

Dear Name

Thank you very much for your email/phone call. I am very pleased that you are interested in supporting my proposed study of non-medical prescribers and would like to provide further details about the study. I have attached the information sheets that have been developed for potential participants, both prescribers and patients. Your involvement in the study would be as follows:

- To enable access to participants through (i) distribution of information sheets to non-medical prescribers (ii) where possible, I would also like to make a brief presentation about the study to non-medical prescriber meetings, support forums etc., to facilitate their involvement in the study.
- To inform the appropriate service managers about the study. I will develop a separate information sheet for circulation to managers and am happy to meet them, if you think this would be appropriate.
- Whilst I do not anticipate that any of the prescribers will be distressed by their involvement in the study, I would be grateful if I can give your contact details, should any of them wish to talk about any prescribing issues raised in the interview that they found difficult. They will also receive the contact details of my research supervisors should they have any concerns about the conduct of the research.

Your expression of interest will allow me to seek NHS Ethics Committee approval and research governance approval from your Trust. You will be identified as the principal researcher in such applications, which I hope will be acceptable to you. Once the relevant approvals are in place I will contact you to make arrangements to conduct the study.

Please do not hesitate to contact me if you would like any further details of the study.

I look forward to working with you.

With best wishes for the New Year

Denise

## **Appendix 2: Communication with prescribers**

- **Letter inviting participation**
- **Participant information sheet for prescribers**
- **Consent form for prescribers**

**Prescriber Invitation letter**

January 17<sup>th</sup> 2011

Dear *Prescriber*

**Re: Patients with long-term conditions and their use of medicines:  
encounters with nurse/pharmacist prescribers (REC reference: 10/H0302/45,  
Version 1: 12/07/10)**

You are receiving this letter from your non-medical prescribing lead, who has identified you as a nurse or pharmacist prescriber working with patients with a long-term condition. I am writing to ask if you would agree to help me by taking part in a research study that is looking at the way people with a long-term condition, such as diabetes or heart disease, are helped and supported in taking their medicines by nurse/pharmacist prescribers.

The research forms part of a Doctorate in Health Research I am studying at the University of Hertfordshire. It will explore the views of patients and prescribers about taking medicines on a long-term basis and will also look at the actual discussion that takes place between the patient and the prescriber about the medicines and how patients are supported in taking them.

The study is being sponsored by the University of Hertfordshire and has received ethical approval from (Name) NHS Research Ethics Committee and Research & Development approval from NHS (Name). Throughout the study I will be working closely with my research supervisors, Professor Sally Kendall and Professor Hilary Thomas.

Please read the attached information sheet, which gives further details of the study and your involvement with it, if you decide to take part. Please take time to read this leaflet carefully and discuss it with others if you would like to. If you are interested in taking part please contact me and I will arrange to meet you to discuss the study further and answer any queries you may have.

Please do not hesitate to ask me at any time if there is anything that is not clear or if you need more information.

With best wishes

Yours sincerely

*Denise*

Denise Knight

Non-medical prescribing lead/Doctoral student

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### **Prescriber Information sheet**

Denise Knight, School of Nursing & Midwifery, University of Hertfordshire, College Lane, Hatfield AL10 9AB. Telephone: 07811 024722 email: [D.knight@herts.ac.uk](mailto:D.knight@herts.ac.uk)

## ***Patients with long-term conditions and their use of medicines: encounters with nurse/pharmacist prescribers***

(REC reference: 10/H0302/45 Version 1: 12/07/10)

You are invited to take part in a research study that is being conducted as part of my Doctorate in Health Research at the University of Hertfordshire. The study has ethical approval from *Name of ethics committee* and Research & Development approval from *Name of Research Office*. You are being invited to take part in a research study in your capacity as a nurse or pharmacist who prescribes for patients with a long-term condition. Before you decide it is important for you to understand why the research is being done and what it will involve for you. Please take time to read this information carefully, discussing it with others if you wish. Do not hesitate to ask me if there is anything that is not clear to you or if you need more information.

### **What is the study about?**

Whilst prescribed medication is the most common way in which long-term conditions are managed, it is widely recognised that approximately half of all medicines are not taken in the way that the prescriber intended, leading to considerable costs for the individual, the NHS and society. Non-medical prescribers such as nurses and pharmacists now play an increasingly important role in the management of patients with long-term conditions and their contribution to national and local policies is fully acknowledged. There is however very little research that has examined the ways in which the patient's use of medicines is understood or supported by nurse and pharmacist prescribers or which has looked at the nature of the discussion about medicines that takes place in a non-medical prescribing consultation.

This study aims to undertake an in-depth qualitative analysis of the understanding of medicines use held by patients with a long-term condition and the nurse or pharmacist prescriber responsible for their care. It will also examine the nature of the discussion about a patient's use of medicines that occurs within a prescribing consultation.

### **Why choose me?**

The non-medical prescribing lead in your Trust has kindly agreed to support this study and has forwarded this information leaflet to you as you are a non-medical prescriber working with patients with a long-term condition.

### **Do I have to take part?**

You do not have to take part in this study; participation is entirely up to you. If you do agree to participate, you can withdraw from the study at any time, without giving a reason.

### **What will happen if I agree to take part?**

I will discuss the study with you and ask you to sign that you are happy to take part. Initially I will ask you to circulate information sheets about the study to the patients you see regularly in clinic. This will allow them to reach a decision about whether they wish to participate in the study.

The study will then involve two forms of data collection, each of which will take place at your convenience and in any order:

- (i) ***Observation of consultations with patients in a clinic setting:*** *Observation will take place of a consultation with each of three patients who have given their consent for the observation to occur. The consultation will be audio-recorded and I will also make notes of, for example, non-verbal behaviours. You do not have to prescribe during the consultation, as I am also interested in the discussion you may have about the patient's use of prescribed medication.*
- (ii) ***An informal interview.*** *This will allow discussion of your views about patients' use of medicines, factors influencing this and the ways in which you help patients to take their medicines as prescribed. The interview will take place at a time and location convenient for you and should last about 30-45 minutes. With your permission, the interview will be taped to allow me to analyse the results. You will be allowed to stop the recording or leave the interview at any time.*

### **What are the possible disadvantages and risks of taking part?**

The study will involve your time in both the observation and interview phases. I do not believe there are any other disadvantages to your participation and no risks are anticipated.

### **What are the possible benefits of taking part?**

The study will enable an in-depth understanding of this important area of prescribing practice and will inform the practice of nurse and pharmacist prescribers, enabling them to work effectively to improve the lives of those with long term conditions. It will also support the achievement of national and local strategies such as the NHS East of England's strategy, 'Towards the best, together'.

### **What if something goes wrong?**

You are able to contact either of my research supervisors if you are unhappy with any aspect of this research. All relevant contact details are listed below.

### **Will my taking part in this study be kept confidential?**

All of the data collected during the study will be kept confidential. It will be locked in a secure filing cabinet in my office and will contain no information identifying the prescriber, patient or the site of the research. Any computer records will be password-protected and available only to the researcher. Any publications arising from the study will take similar steps to ensure confidentiality.

### **What will happen to the results of the research study?**

In order to ensure that the findings of the study inform the practice of other non-medical prescribers, I will seek to publish the results in a peer-reviewed journal and present them at relevant conferences. I will be pleased to send you the results of the study if you let me know you would like to have them.

**Who is organising and funding the research?**

The study is being conducted as part of my Doctorate in Health Research and is being supported by my employer. I have received no external funding.

Please don't hesitate to get in touch if you would like more information. My contact details are listed above and also at the end of this sheet.

If you are interested in taking part, please contact me by email or 'phone. I will then contact you so that we can meet to discuss your involvement in the study and gain signed consent. If you agree to take part, the interview can take place at that time although, if it's not convenient, another time will be agreed.

If you are interested in taking part, please contact me by email or 'phone. I will then contact you so that we can meet to discuss your involvement in the study and gain signed consent. If you agree to take part, the interview can take place at that time although, if it's not convenient, another time will be agreed.

**Thank you for reading this information sheet, which you may keep.**

**Contact Details**

Denise Knight, School of Nursing and Midwifery, University of Hertfordshire, College Lane, Hatfield AL10 9AB. Tel: 07811 024722 email: [d.knight@herts.ac.uk](mailto:d.knight@herts.ac.uk)

**Research governance lead:**

(Details of Trust lead)

**Research supervisors:**

Professor Sally Kendall, Tel: 01707 283380, Email: [s.kendall@herts.ac.uk](mailto:s.kendall@herts.ac.uk)

Professor Hilary Thomas, Tel: 01707 281311, Email: [h.a.thomas@herts.ac.uk](mailto:h.a.thomas@herts.ac.uk)

**Patients with long-term conditions and their use of  
medicines: encounters with nurse/pharmacist prescribers**  
**(REC reference: 10/H0302/45 Version 2: 08/10)**

## **CONSENT FORM**

**Name of Researcher: Denise Knight**

I confirm that:

- I have read and understood the study's Information Sheet.
- I have had an opportunity to consider the information about this study.
- Any questions that I had about this study have been answered fully.
- 

I understand that:

- My participation is completely voluntary, that I am free to withdraw at any time, and that I do not have to give a reason for doing so.
- Any information I give will remain confidential unless, in the professional judgement of the researcher, there is evidence of poor practice or risk of harm to the patient, when my non-medical prescribing lead will be informed.
- Any publicity about the results of the study will not contain information that could identify me.

I agree:	Please initial
(i) To take part in the study	
(ii) That tape recordings can be made of the discussion that occurs in my consultation with the patient and my discussion with the researcher	

Name \_\_\_\_\_

Signature \_\_\_\_\_

Date \_\_\_\_\_

When completed, 1 copy for participant; 1 copy for researcher file

## **Appendix 3: Communication with patients**

- **Letter inviting participation**
- **Participant information sheet for patients**
- **Consent form for patients**

### Letter inviting participation

Dear Sir or Madam

**Patients with long-term conditions and their use of medicines:  
encounters with nurse/pharmacist prescribers (REC reference:  
10/H0302/45 Version 1: 12/07/10)**

You are receiving this letter as your nurse or pharmacist prescriber sees you regularly in relation to the medicines you take on a long-term basis for your condition. I am writing to ask if you would agree to help me by taking part in a research study that is looking at the way people with a long-term condition, such as diabetes or heart disease, are helped and supported in taking their medicines by their nurse and pharmacist prescribers.

The research forms part of a Doctorate in Health Research I am studying at the University of Hertfordshire. It will explore the views of patients and prescribers about taking medicines on a long-term basis and will also look at the actual discussion that takes place between the patient and the prescriber about the medicines and how patients are supported in taking them.

The study is being sponsored by the University of Hertfordshire and has received ethical approval from *Name of ethics committee* and Research & Development approval from *Name of Research Office*. Throughout the study I will be working closely with my research supervisors, Professor Sally Kendall and Professor Hilary Thomas.

Please read the attached information sheet, which gives further details of the study and your involvement with it, if you decide to take part. Please take time to read this leaflet carefully and discuss it with others if you would like to. If you are interested in taking part please contact me and I will arrange to meet you to discuss the study further and answer any queries you may have.

Please do not hesitate to ask me at any time if there is anything that is not clear or if you need more information.

With best wishes

Yours sincerely

Denise Knight

Non-medical prescribing lead/Doctoral student

University of Hertfordshire

Tel: 07811 024722

Email: [d.knight@herts.ac.uk](mailto:d.knight@herts.ac.uk)

**Supervisor contact details:**

Professor Sally Kendall, Centre for Research in Primary & Community Care,  
[s.kendall@herts.ac.uk](mailto:s.kendall@herts.ac.uk)

Professor Hilary Thomas, Centre for Research in Primary & Community  
Care, [h.a.thomas@herts.ac.uk](mailto:h.a.thomas@herts.ac.uk)

## **Patient information sheet**

**Patients with long-term conditions and their use of medicines: encounters with nurse/pharmacist prescribers**  
**(REC reference: 10/H0302/45 Version 1: 12/07/10)**

I am writing to ask if you would agree to help me by taking part in a research study that is looking at the way people with a long-term condition, such as diabetes or heart disease, are helped and supported in taking their medicines by their nurse and pharmacist prescribers.

### **Why have I been chosen?**

Your nurse or pharmacist prescriber has forwarded this invitation/information leaflet to you, as they are the people involved in managing your long-term condition

Before you decide that you would like to help it is important for you to understand why the research is being done and how it would involve you. So please take time to read this leaflet carefully and discuss it with others if you would like to. Please do not hesitate to ask me if there is anything that is not clear or if you need more information.

### **What is the study about?**

Nurses and pharmacists are taking an increasing role with patients who have a long-term condition, including prescribing their medicines. This study will look at the views of patients and prescribers about taking medicines on a long-term basis. It will also look at the actual discussion that takes place between the patient and the prescriber about the medicines and how patients are supported in taking them.

### **Do I have to take part?**

It is entirely up to you whether you agree to help me by taking part. If you agree and later change your mind, you can withdraw from the study at any time, without giving a reason. **It will make**

no difference to the care that you receive whether you take part in the study, or not.

### What will happen if I agree to take part?

**First I will discuss the study with you and ask you to sign that you are happy to participate.** Then information will be collected in two ways:

***Observation by me of a consultation with the nurse or pharmacist prescriber responsible for your care, in which your medicines are discussed. With your permission, the consultation will be tape-recorded and I will also make brief notes of what takes place during the consultation.***

***An interview with me at a time and place that's convenient for you. We will discuss your views about your use of medicines, anything that influences this and the ways in which you would like to be supported to take your medicines as prescribed. This should last about 30-45 minutes. With your permission, the interview will be tape-recorded to allow me to analyse the results afterwards. You will be allowed to stop the recording or end the interview at any time.***

***Please note that the interview can still go ahead even if you do not want your consultation to be observed***

### What are the possible disadvantages and risks of taking part?

There are no anticipated disadvantages or risks involved in the study although the observation and/or interview will involve your time.

### What are the possible benefits of taking part?

The findings of the study will help the nurse and pharmacist prescribers to work more effectively to help patients with long term conditions. This will contribute to improvement in the health and well-being of patients.

### What if something goes wrong?

If you are unhappy with any aspect of this research you can, at any time, contact one of my academic supervisors whose details can be found below.

**Will my taking part in this study be kept confidential?**

All of the information collected during the study will be kept confidential. It will be locked in a secure filing cabinet in my office and will contain no information identifying you, your prescriber or the site of the research. Any computer records will be password-protected and available only to the researcher. Any reports arising from the study will take similar steps to ensure confidentiality.

I will advise your GP or consultant if you agree to take part in the study although I will not share any of the information collected during the study.

**What will happen to the results of the research study?**

The results of the study will be reported in journals and presented at relevant conferences to inform the practice of other nurse and pharmacist prescribers. I will be pleased to send you the results of the study if you let me know that you would like to have them.

**Who is organising and funding the research?**

The study is being conducted as part of my Doctorate in Health Research and is being supported by my employer. I have received no external funding.

**Who has reviewed the study?**

The study has been fully approved by the XXX NHS Research Ethics Committee and the XXX Trust Research and Development Department.

Please don't hesitate to get in touch if you would like more information. My contact details are listed at the end of this sheet.

**Please contact me by email or 'phone if you are interested in taking part. I will then contact you so that we can meet to discuss your involvement in the study and gain signed consent. If you agree to be interviewed, it can take place at**

**that time. If it's not convenient for you, another time will be agreed.**

**Thank you for reading this information sheet, which you may keep.**

**Contact details:** Denise Knight, School of Nursing and Midwifery, University of Hertfordshire, College Lane, Hatfield AL10 9AB. Tel:07811 024722 email: [d.knight@herts.ac.uk](mailto:d.knight@herts.ac.uk)

**Patients with long-term conditions and their use of medicines:  
encounters with nurse/pharmacist prescribers (REC reference:  
10/H0302/45 Version 2: 08/10)**

**Name of Researcher: Denise Knight**

## **CONSENT FORM**

**I confirm that:**

- I have read and understood the study's Information Sheet,
- I have had an opportunity to consider the information about this study
- Any questions that I had about this study have been answered fully

**I understand that:**

- My participation is completely voluntary, that I am free to withdraw at any time, and that I do not have to give a reason for doing so.
- My GP/consultant will be advised that I am taking part in the study although results will not be shared with him/her.
- Any information I give will remain confidential unless, in the professional judgment of the researcher, it shows that I am at risk from harm when the situation will be discussed with me and my nurse/pharmacist prescriber.
- Any publicity about the results of the study will not contain information that could identify me.

**I agree to take part in the study as follows (Please initial)**

- |   |       |
|---|-------|
| (i) The observation phase only                  | ..... |
| (ii) The interview phase only                   | ..... |
| (iii) Both the observation and interview phases | ..... |

I agree that tape recordings can be made of the discussion that occurs in my consultation with the nurse or pharmacist and/or of my discussion with the researcher

Name \_\_\_\_\_

Signature \_\_\_\_\_ Date \_\_\_\_\_

When completed: 1 copy for participant, 1 copy for researcher file

## **Appendix 4: Interview topic guides**

- **Interview topic guide for patients**
- **Interview topic guide for prescribers**

***Patients with long-term conditions and their use of medicines: encounters with nurse/pharmacist prescribers (REC reference: 10/H0302/4 Version 1: 12/07/10)***

### **Interview topic guide**

#### **Patient interviews**

##### **Introductory remarks**

*The interview will begin with general conversation to enable the participant's relaxation and comfort. Opening remarks will include the following points:*

*As you'll be aware, this study is concerned with the ways in which nurse and pharmacist prescribers support the use of medicines in patients with a long-term condition. I am very interested in your views about this and would like to thank you for agreeing to take part in this interview.*

*As you'll remember you agreed that I could record our discussion – are you still happy for this to happen?*

*Please be aware that you can ask me to stop recording at any time or you can leave the interview. Everything that is said in the interview will remain confidential.*

*Are you happy to go ahead?*

##### **Interview topic guide**

The interview will involve a semi-structured approach, consisting of a number of broad, open-ended questions. The participant will be allowed to respond to the question fully in his/her own words, although a number of prompts may be used to elicit further information. Consent for the interview to continue will be re-negotiated at any time, should the participant appear to find the discussion difficult. They will be advised of relevant forms of support such as the prescriber, the local PALS contact and the researcher's academic supervisors.

##### **1. Can you tell me about the condition that you see (name of prescriber) about?**

*Prompts, where necessary, will include:*

- *How long have you had the condition?*
- *How often do you see (name of prescriber)?*
- *What medicines do you take to control the condition?*

##### **2. How do you feel about taking medicine(s) on a regular basis?**

*Prompts, where necessary, will include:*

- *How much effort do you feel it takes on your part?*

- *In what ways does it affect your life?*
- *What difficulties, if any, do you find in taking your medicine(s) in the way that they are prescribed?*

**3. What do you think helps you to take the medicine(s) in the way that they should be?**

*Prompts, where necessary, will include:*

- How about support from your family or friends?*
- What sorts of information do you find it helpful to receive from the prescriber?*
- In what ways do you like to be involved in decisions about your medicines?*
- To what extent do you like to work in partnership with the prescriber?*
- What kinds of on-going support do you like to receive from the prescriber?*
- What other types of support do you find helpful?*

**4. How do you feel about the support you receive from a nurse (or pharmacist) prescriber?**

*Prompts, where necessary, will include:*

- In what ways does this help you with your medicines?*
- Is there any other support you'd like to receive from a nurse/pharmacist prescriber?*

**5. Is there anything else you'd like to share, that I haven't asked?**

**Concluding the interview:**

Participants will be thanked for their involvement and I will offer to send them a summary of the study report, if they contact me

**Patients with long-term conditions and their use of medicines: encounters  
with nurse/pharmacist prescribers (REC reference: 10/H0302/4 Version 1:  
12/07/10)**

**Interview topic guide**

**Prescriber interviews**

***Introductory remarks:***

*The interview will begin with general conversation to enable the participant's relaxation and comfort. Opening remarks will include the following points:*

*As you'll be aware, this study is concerned with the ways in which nurse and pharmacist prescribers support the use of medicines in patients with a long-term condition. I am very interested in your views about this and would like to thank you for agreeing to take part in this interview.*

*As you'll remember, you agreed that I could record our discussion – are you still happy for this to happen?*

*Please be aware that you can ask me to stop recording at any time or you can leave the interview. Everything that is said in the interview will remain confidential.*

***Are you happy to go ahead?***

***Interview topic guide:***

The interview will involve a semi-structured approach, consisting of a number of broad, open-ended questions. The participant will be allowed to respond to the question fully in his/her own words, although a number of prompts may be used to elicit further information. Consent for the interview to continue will be re-negotiated at any time should the participant appear upset by the discussion. They will be advised of relevant forms of support such as the local non-medical prescribing lead and the researcher's academic supervisors.

**1. Can you tell me about your experience as a non-medical prescriber working with patients with (name of long-term condition)**

*Prompts, where necessary, will include:*

- How long have you been working with patients with (name of long-term condition)?*
- *How long have you been prescribing?*
- *What medicines do you normally prescribe?*

**2. To what extent do you feel that patients find it challenging to take their medicines as prescribed?**

Prompts, where necessary, will include:

- *In what ways do you think taking medicines regularly affects patients' lives?*

- *In what ways might it take effort on the part of patients to take medicines as prescribed?*

- *What sorts of concern might they have about the safety of their medicines?*

**3. What factors do you think influence patients in taking their medicines as prescribed?**

Prompts, where necessary, will include:

- *To what extent is their understanding of their condition an influence?*

- *How about support from their family or friends?*

- *In what ways does a patient's involvement in decisions about their medicines influence their use of them?*

- *What kinds of on-going support do you think are helpful?*

**4. In what ways do you support a patient's use of medicines as a prescriber?**

Prompts, where necessary, will include:

- *In what ways do you do this at a review visit?*

- *How would you manage a patient who has on-going difficulties with his/her use of medicines?*

- *What, if anything, prevents you from providing the support you believe a patient needs?*

**5. Is there anything else you'd like to share, that I haven't asked?**

**Concluding the interview:**

Participants will be thanked for their involvement and I will offer to send them a summary of the study report, if they contact me.

## **Appendix 5: Research approvals**

- **Ethical approval**
- **Research & development approval**



## National Research Ethics Service

### Essex 2 Research Ethics Committee

East of England Rec Office 1

Victoria House

Capital Park

Fulbourn

Cambridge

CB21 5XB

Telephone: 01223 597693

Fax: 01223 597645

12 August 2010

Ms Denise Knight  
Nursing, Midwifery & Social Work  
University of Hertfordshire  
College Lane, HATFIELD  
AL10 9AB

Dear Ms Knight

**Study Title:** Patients with long-term conditions and their use of medicines: encounters with nurse/pharmacist prescribers  
**REC reference number:** 10/H0302/45

The Research Ethics Committee reviewed the above application at the meeting held on 04 August 2010. Thank you for attending to discuss the study.

#### Ethical opinion

In discussion the Committee noted the following ethical issues.

- Explain why option for observation or 1-1 interviews can they not have both.
- What is the procedure if poor practice is observed?
- Has the researcher taught any of the potential participants-coercion?

You were invited into the meeting to discuss the Committee's concerns

You gave an overview of your study and clarified that if a potential participant does opt for both the observation and the 1-1 interview you would try to undertake both. You explained to the Committee how the non medical prescribers would be selected and that you will ensure they will not feel coerced in any way. You confirmed that you may well have taught a minority of potential participants but as the teacher/student relationship is in the past you will reassure them to ensure there is no issue of coercion. You explained to the satisfaction of the Committee the action you will take if poor practice or any form of risk is uncovered during the course of this study. You informed the Committee there is no direct link to medical prescribing but this study will be of some interest to that group of prescribers. The committee was fully satisfied with your responses.

The members of the Committee present gave a favourable ethical opinion of the above research on the basis described in the application form, protocol and supporting documentation, subject to the conditions specified below.

#### Ethical review of research sites

The favourable opinion applies to all NHS sites taking part in the study, subject to

This Research Ethics Committee is an advisory committee to East of England Strategic Health Authority

*The National Research Ethics Service (NRES) represents the NRES Directorate within the National Patient Safety Agency and Research Ethics Committees in England*

management permission being obtained from the NHS/HSC R&D office prior to the start of the study (see "Conditions of the favourable opinion" below).

### **Conditions of the favourable opinion**

The favourable opinion is subject to the following conditions being met prior to the start of the study.

Management permission or approval must be obtained from each host organisation prior to the start of the study at the site concerned.

*For NHS research sites only, management permission for research ("R&D approval") should be obtained from the relevant care organisation(s) in accordance with NHS research governance arrangements. Guidance on applying for NHS permission for research is available in the Integrated Research Application System or at <http://www.rdforum.nhs.uk>. Where the only involvement of the NHS organisation is as a Participant Identification Centre, management permission for research is not required but the R&D office should be notified of the study. Guidance should be sought from the R&D office where necessary.*

*Sponsors are not required to notify the Committee of approvals from host organisations.*

### **Other conditions specified by the REC**

1. Both Participant Information Sheets (PIS) must contain clear information to the participants that information will be kept confidential unless there is disclosure relating to poor practice or risk from harm and in that case the action that will be taken to disclose this information..

**It is responsibility of the sponsor to ensure that all the conditions are complied with before the start of the study or its initiation at a particular site (as applicable).**

**You should notify the REC in writing once all conditions have been met (except for site approvals from host organisations) and provide copies of any revised documentation with updated version numbers.**

### **Approved documents**

The documents reviewed and approved at the meeting were:

Document	Version	Date
Investigator CV		12 July 2010
Protocol	1.0	12 July 2010
REC application	3.0	19 July 2010
Covering Letter		15 July 2010
Letter from Sponsor		13 July 2010
Interview Schedules/Topic Guides	1.0	12 July 2010
Letter of invitation to participant	1.0	12 July 2010
Letter of invitation to participant	1.0	12 July 2010
GP/Consultant Information Sheets	1.0	12 July 2010
GP/Consultant Information Sheets	1.0	12 July 2010
Participant Information Sheet: Patient	1.0	12 July 2010
Participant Consent Form: Prescriber	1.0	12 July 2010
Participant Information Sheet: Prescriber	1.0	12 July 2010

Participant Consent Form: Patient	1.0	12 July 2010
Evidence of insurance or indemnity		01 August 2009

### Membership of the Committee

The members of the Ethics Committee who were present at the meeting are listed on the attached sheet.

### Statement of compliance

The Committee is constituted in accordance with the Governance Arrangements for Research Ethics Committees (July 2001) and complies fully with the Standard Operating Procedures for Research Ethics Committees in the UK.

### After ethical review

Now that you have completed the application process please visit the National Research Ethics Service website > After Review

You are invited to give your view of the service that you have received from the National Research Ethics Service and the application procedure. If you wish to make your views known please use the feedback form available on the website.

The attached document "After ethical review – guidance for researchers" gives detailed guidance on reporting requirements for studies with a favourable opinion, including:

- Notifying substantial amendments
- Adding new sites and investigators
- Progress and safety reports
- Notifying the end of the study

The NRES website also provides guidance on these topics, which is updated in the light of changes in reporting requirements or procedures.

We would also like to inform you that we consult regularly with stakeholders to improve our service. If you would like to join our Reference Group please email [referencegroup@nres.npsa.nhs.uk](mailto:referencegroup@nres.npsa.nhs.uk).

10/H0302/45

Please quote this number on all correspondence

With the Committee's best wishes for the success of this project

Yours sincerely

  
Mr Royston Van Tromp  
Acting Chair

Email: [suzanne.emerton@eoe.nhs.uk](mailto:suzanne.emerton@eoe.nhs.uk)

Enclosures: List of names and professions of members who were present at the meeting and those who submitted written comments  
 "After ethical review – guidance for researchers"

RMG Office

Address & details

## **Research governance approval**

27<sup>th</sup> October 2010

Ms Denise Knight  
Nursing, Midwifery & Social Work  
University of Hertfordshire  
College Lane, HATFIELD  
AL10 9AB

Dear Ms Knight

**Re: L001067 Patients with long-term conditions and their use of medicines: encounters with nurse/pharmacist prescribers**

**Re: 10/H0302/45, Name, Respiratory Nurse Team Leader: Nonmedical prescribing lead, Trust name**

Your proposal has been reviewed by NHS Name's Research Governance Panel in accordance with the Department of Health Research Governance Framework for Health and Social Care.

I am pleased to inform you that NHS Name has given permission for the following research to take place. This is subject to the enclosed standard terms and conditions and unless we hear from you within a month of this letter, we will assume that you are abiding by these conditions.

The project must follow the agreed protocol and be conducted in accordance with Trust policy and procedures in particular in regard to data protection, health & safety and information governance standards. The research team are required to follow the reasonable instructions of the research site manager and can contact the RMG office for RMG advice or the Trust RMG lead in relation to queries on local policy.

On completion of clinical trials of interventional medicinal products/devices participants need to be aware that local Trust prescribing policy and formulary applies therefore participants cannot expect to continue on the research trial product/device on completion of the trial.

Approval is subject to adherence to the Data Protection Act 1998, NHS Confidentiality Code of Practice, the Human Tissue Act 2004, the NHS Research Governance Framework for Health and Social Care, (2nd edition) April 2005, the Mental Capacity Act and any further legislation released during the time of this study. Approval for Clinical Trials is on the basis that they are conducted in accordance with European Union Directive and the Medicines for Human Use

(Clinical Trials) Regulations 2004 principles, guidelines and later revisions, and in accordance ICH Good Clinical Practice.

Members of the research team must where instructed have appropriate substantive or honorary research contracts or letters of access with the Trust prior to commencing work on the study, additional researchers who join the study must also hold a suitable contract or letter of access before they start.

You will be required to complete monitoring information during the course of the research, as requested by the RMG office. NHS Name reserves the right to withdraw research management approval for a project if researchers fail to respond to audit and monitoring requests.

Should any adverse incidents occur during the research, NHS Name's Incident and Near Miss Reporting Policy should be used, the RMG Office informed and incident procedures adhered to at the research site.

If you make any amendments to your project, please ensure that these are submitted to the research ethics committee and the RMG office and that any changes are not implemented until approval has been received.

We welcome feedback about your experience of this review process to help us improve our systems. May I take this opportunity to wish you well with your research and we look forward to hearing the progress and outcomes for the study.

Please contact the RMG team should you have any queries.

Yours sincerely,

Signature

Name

Head of Clinical Quality

NHS Name

## **Appendix 6:**

### **Overall codes and preliminary themes identified**

## Overall codes and preliminary themes identified from encounters and interviews

### ENCOUNTER DATA

- ❖ Daily life vs medical condition (Voice of Lifeworld vs Voice of Medicine)
- ❖ Medicines and their use
  - Moral position re medicines and management of condition
  - Checking patients' use of medicines
  - Examples of non-adherence
  - Rational reason for non- adherence or non-engagement
  - Prescription of medicines
  - Discussion of side effects
  - Discussion of purpose
  - Negotiation re medicines
- ❖ Use of humour
- ❖ Nurses' use of their personal experience
- ❖ Patient knowledge
  - Perceived value of education
  - Instruction re medicines
  - Instruction re condition
  - Acknowledgment of patient experience/ expertise
  - Patients asserting their knowledge and expertise
  - Patients not knowing their medicines
  - Use of written information about medicines/conditions
- ❖ Communication approach
  - Summarising decisions & actions
  - Nurses using voice of the lifeworld
  - Use of small talk
  - Use of open questions
  - Use of closed questions
- ❖ Use of patient notes
- ❖ Patient assertiveness
- ❖ Consideration of social needs
- ❖ Resources to support management of condition
- ❖ Reference to evidence base

### INTERVIEW DATA

## NURSE'S ROLE AS A PRESCRIBER

- ❖ Nature of role
  - Prior experience and background
  - Length of experience as a prescriber
  - Frequency of prescribing
- ❖ Professional responsibility and prescribing
  - Demonstrating professional responsibility
  - Comparing medical and non-medical prescribing
- ❖ Supports and constraints in prescribing role
  - Time and other resources
  - Prescribing across the hospital-primary care interface
  - Working with patient at home
- ❖ Value of nurse prescribing role
  - Benefits for nurse prescribers
  - Patient perceptions of skills and approach
  - Relationship with nurse prescriber
  - Availability of nurse prescriber

## PATIENT EXPERIENCE

- ❖ Living with a long-term condition
  - Initial diagnosis
  - Impact of condition
  - Impact on family
  - Being different from others
  - Social care needs
  - Hope for future treatments
- ❖ Experience of health care
  - Specialist team providing care
  - GP surgery
  - Repeat prescription system
  - Availability of health care staff
  - Suggestions to enhance care & support

## MORAL APPROACH TO MANAGING CONDITION

- ❖ Personal responsibility
  - Active involvement in decision-making
  - Personal responsibility for managing condition
- ❖ Importance of control

- Controlling condition
- Moral approach to medicines' use
- Having the right mental attitude
  
- ❖ Achieving a normal life
- Accepting condition
- Carrying on as normal
- Maintaining independence
  
- ❖ Health & luck
- Gratitude for well-being
- Comparison with others

## PATIENTS' USE OF MEDICINES

- ❖ Patients not taking medicines as prescribed
- Nature & scale of issue
- Not taking medicines as prescribed – patient views
- Not taking medicines as prescribed – prescriber views
- Checking up on patients
  
- ❖ Decision-making about medicines
- Partnership & negotiation
- Patient's right to make decision
  
- ❖ A moral approach to medicines' use
- Beliefs about medicines
- Avoiding dependence on medicines
- Accepting medicines when necessary
- Nurses' caution with drugs

## INFLUENCING FACTORS

- ❖ Information about drugs
- Value of information
- Inadequate provision of information
- Patient's ability to understand
- Media sources
  
- ❖ Sources of support
- Families
- Friends and work colleagues
- Health care professionals
- Group support
- Other forms of support

- ❖ Medicines factors
  - Polypharmacy
  - Cost of prescriptions
  - Branded or generic medicines
  - Dislike of change in medicines
  - Form of medicine
  - Side effects
  - Interaction with other medicines
- ❖ Patient factors
  - Age
  - Education level
  - Motivation
- ❖ Condition factors
  - Medicines' use when condition appears controlled
  - Perceived importance of other conditions
- ❖ Practical strategies
  - Part of everyday routine
  - Use of compliance aids
  - Medicines list

## **Appendix 7: Arrangements for Access to Data**

**Access to data:**

In accordance with the Department of Health's commitment to openness and transparency in research and the National Institute of Health Research (NIHR) expectation that all researchers should have explicit plans to enable other researchers to have access to their data (NIHR 2014), access to transcripts will be made available to other researchers on receipt of the following:

1. A summary of the study in which the data will be used, demonstrating the relevance of the data requested.
2. Details of any external funding for the study being conducted.
3. Confirmation of the ways in which relevant ethical, legal and regulatory frameworks will be respected when using the data. The confirming statement should, in particular, include details of the ways in which the data will be stored, the length of storage and how anonymity and confidentiality of participants and research sites will be protected.
4. Confirmation that the current study will be cited in any publication arising from the researcher's study.

Requests for access to data should be made to: Denise Knight, [d.knight@herts.ac.uk](mailto:d.knight@herts.ac.uk)

