Psychotropic Medication Prescribing Patterns in English Prisons: A Mixed Methods Study

A thesis submitted to the University of Manchester for the degree of Doctor of Philosophy in the Faculty of Medical and Human Sciences

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School of Medicine
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<th>Abbreviation</th>
<th>Description</th>
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<tbody>
<tr>
<td>ADHD</td>
<td>Attention Deficit Hyperactivity Disorder</td>
</tr>
<tr>
<td>BNF</td>
<td>British National Formulary</td>
</tr>
<tr>
<td>CBT</td>
<td>Cognitive Behavioural Therapy</td>
</tr>
<tr>
<td>CNS</td>
<td>Central Nervous System</td>
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<tr>
<td>CMHT</td>
<td>Community Mental Healthcare Team</td>
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<tr>
<td>CPN</td>
<td>Community Psychiatric Nurse</td>
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<tr>
<td>DAM</td>
<td>Discursive Action Model</td>
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<tr>
<td>GAD</td>
<td>General Anxiety Disorder</td>
</tr>
<tr>
<td>GP</td>
<td>General Practitioner</td>
</tr>
<tr>
<td>GPRD</td>
<td>General Practice Research Database</td>
</tr>
<tr>
<td>HMPS</td>
<td>Her Majesty’s Prison Service</td>
</tr>
<tr>
<td>IAPT</td>
<td>Improving Access to Psychological Therapies</td>
</tr>
<tr>
<td>MAO-I</td>
<td>Mocioamine Oxidase Inhibitors</td>
</tr>
<tr>
<td>NHS</td>
<td>National Health Service</td>
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<tr>
<td>NICE</td>
<td>National Institute of Health and Clinical Excellence</td>
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<tr>
<td>OCD</td>
<td>Obsessive Compulsive Disorder</td>
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<tr>
<td>ONS</td>
<td>Office for National Statistics</td>
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<tr>
<td>OHRN</td>
<td>Offender Health Research Network</td>
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<tr>
<td>PCT</td>
<td>Primary Care Trust</td>
</tr>
<tr>
<td>PTSD</td>
<td>Post Traumatic Stress Disorder</td>
</tr>
<tr>
<td>RCGP</td>
<td>Royal College of General Practitioners</td>
</tr>
<tr>
<td>REC</td>
<td>Research Ethics Committee</td>
</tr>
<tr>
<td>RMN</td>
<td>Registered Mental Nurse</td>
</tr>
<tr>
<td>RR</td>
<td>Risk Ratio</td>
</tr>
<tr>
<td>SPSS</td>
<td>Statistical Package for the Social Sciences</td>
</tr>
<tr>
<td>SSRI</td>
<td>Selective Serotonin Reuptake Inhibitor</td>
</tr>
<tr>
<td>TCA</td>
<td>Tricyclic Antidepressant</td>
</tr>
<tr>
<td>YOI</td>
<td>Young Offender Institution</td>
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Abstract

The University Of Manchester
Name: Lamiece Ezzat Rageh Hassan
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Thesis Title: Psychotropic medication prescribing patterns in English prisons: a mixed methods study
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Background: Psychotropic medicines are widely used to treat mental illness in the community. In prisons, however, the continuity and appropriateness of prescribing for mentally ill prisoners have been questioned. There has been little research on the use of psychotropic medicines in prisons in England and Wales; yet this information is essential for determining the extent to which there is equivalence of care between prisons and the community and for effective medicines management.

Aims and objectives: This study aimed to determine patterns of psychotropic prescribing in prisons and consider the extent to which people with mental illness have ‘equivalent’ access to psychotropic medicines in prison.

Methods: A mixed methods design was used, incorporating three interrelated studies: a retrospective case note review to estimate the proportion of prescriptions for psychotropic medicines which were discontinued on entry to prison; a cross-sectional survey to estimate point-prevalence psychotropic prescribing rates in prisons, as compared with the community; and a qualitative interview study with members of prison healthcare staff and patients with mental illness to a) explore the perceived purpose of psychotropic prescribing and b) to deconstruct patient and doctor accounts of medication changes on entry to prison.

Findings: Half (47%) of all psychotropic medicines reported on entry into prison were not prescribed within seven days of arrival. The cross-sectional study found that psychotropic medications were prescribed to 20% of men and 44% of women in prison; age-adjusted prescribing rates were at least five times higher in prison than in the general population. However, no valid clinical indication was recorded for half (47%) of prescriptions for psychotropic medication in prison. Qualitative analysis showed that patients interpreted the principle of equivalence differently to doctors and attributed negative outcomes to changes to medication regimes in prison. Patients reported using psychotropic medicines to reduce symptoms of mental illness, but also as a coping strategy and to reduce insomnia. Whilst staff voiced concerns regarding possible overreliance on psychotropic drugs, patients perceived insufficient access to alternative forms of treatment and support in prison.

Discussion: These findings confirm high use of psychotropic medicines in prison and caution prison prescribers against abrupt withdrawal of psychotropic medicines on entry to prison, overreliance on psychotropic medicines, potentially inappropriate prescribing and poor record keeping. Strengths and limitations, implications for practice and recommendations for future work are also discussed.
Declaration

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I would never have started, let alone completed, this thesis without my excellent and supportive team of supervisors. In particular, I will always be grateful to Jenny Shaw, my lead supervisor, for giving me this opportunity. I also owe thanks to my supervisor, Dawn Edge, and advisor, Jane Senior, for their consistent support and guidance, and for the detailed and high-quality feedback they have given me on drafts of my work. Martin Frisher kindly spent numerous afternoons showing me how to use the community dataset and troubleshooting when things went wrong. I also thank all my friends and colleagues at the Offender Health Research Network for their encouragement and advice.

Many people helped me to organise and carry out the fieldwork. In this respect, I am especially grateful to Denise Farmer for her expert advice, encouragement and help throughout. I also thank Maggie Aramowicz, Meg Cox, Julie Dhuny, Wayne Griffin, Rhusubh Katkoria, Pras Rampluggun and Chris Street for their assistance. Thank you also to the staff and patients who participated in interviews and shared their experiences with me for this research. I also received free access to data from the General Practice Research Database, funded by the Medical Research Council through a licence agreement with MHRA.

Last but not least, I could not have made it through the last four years without the love and support of my friends and family. Thank you for putting up with my obsession with medication and prisons, and for providing encouragement and welcome distraction in equal measures. I know you will hold me to the many promises I have made that all start with “when I’ve finished the PhD...”. In particular, I owe a special thank you to Andy, who has always believed in me.
About the author

I completed a Bachelor of Science degree in Psychology in 2002. I then worked for South Tyneside Healthcare Trust for two years, developing a health promotion strategy for the hospital. During this time I started a part-time MPhil in Psychology, a qualitative study that used a discursive psychological approach to explore talk regarding settings-based approaches to health promotion.

In 2004, I accepted a post as a research assistant at the University of Chester within the Social and Health Evaluation Unit. For the next two years I worked on several evaluation projects across a variety of settings and services including the NHS, higher education and the criminal justice system. In 2006 I joined the Offender Health Research Network (OHRN), based at the University of Manchester, to work on a series of projects including a national evaluation of prison mental health ‘in-reach’ services and a prospective study of mental health during the early period of imprisonment. I have been employed at the OHRN ever since. I started my PhD in 2008.
1. Introduction

Mental illness is significantly more common among prisoners than the general population. Ideally, imprisonment should offer an opportunity to engage a socially excluded group in healthcare, thereby reducing health inequalities. However, the quality of mental healthcare and prescribing for prisoners with mental illness has been questioned (Bradley, 2009; HM Inspectorate of Prisons, 2007). The thesis describes three interlinked studies undertaken to establish the patterns of psychotropic prescribing patterns in prisons in England and Wales and qualitative perspectives on their use.

This thesis is presented in ‘alternative format’, which is a style of thesis that incorporates sections which are suitable for publication, or have already been published. This thesis is therefore structured as follows. Chapter two provides a background to prison healthcare services and a review of the relevant literature on mental illness, prison mental health services, psychotropic medicines and medicines management in prisons. Chapter three presents a rationale for this mixed methods study and details of the quantitative methods (studies one and two). Chapter four details the findings of these quantitative studies, presented as the following papers:


**Paper 2:** Hassan L, Senior J, Frisher M, Edge D & Shaw J. (To be submitted). A cross-sectional study of psychotropic medication prescribing patterns in prisons.

Chapter five details the methods and rationale for the qualitative component of this mixed methods study (study three). The findings of the qualitative study are presented in Chapter six as the following papers:


**Paper 4:** Hassan L, Edge D, Senior J & Shaw J. (To be submitted). Accounting for psychiatric medication changes in prisons: a discursive analysis of staff and patient perspectives.

Chapter seven presents a discussion of findings, including limitations, clinical implications and recommendations for future research.
2. Literature Review

This chapter will:

- Introduce the prison estate in England and Wales and the policy context of prison healthcare services;
- Describe rates of mental illness among prisoners and the health needs of mentally ill prisoners;
- Describe current models of mental health screening in prisons and services for people with mental illness in prison;
- Describe the range of psychotropic medicines used to treat mental illness and alternatives to medication;
- Outline the historical context and contemporary challenges associated with prescribing psychotropic medications in prisons;
- Identify and critique the available research literature on psychotropic prescribing patterns in prisons; and
- Identify gaps in the literature and the aims and research questions for the current study.

2.1 Prisons and prison healthcare services

2.1.1 The prison estate

“Her Majesty's Prison Service serves the public by keeping in custody those committed by the courts. Our duty is to look after them with humanity and help them lead law-abiding and useful lives in custody and after release.”

(Ministry of Justice, 2012)

There are currently 134 prisons in England and Wales. Eleven of these are privately managed by companies such as G4S and Sodexo. The remainder are run by the public sector. There are several types of prison with different populations, functions and levels of security. Prisons can serve more than one function. Two of the main types are local and training prisons. Local prisons accept prisoners directly from court and house prisoners on remand and convicted prisoners with shorter sentences. Training prisons house sentenced prisoners and provide training and educational, vocational and offending behaviour courses to help to improve prospects on release. There are also closed and open prisons. Prisoners are allocated security categories (A-D) on the basis of the likelihood of escape and the risk of
harm posed to other prisoners, prison staff and (if they were to escape) the public (HM Prison Service, 2000). Open (category D) prisons do not have a secure perimeter and are suitable for prisoners who can be trusted not to escape, are near to the end of their sentence and are low risk to the public. There are also eight high security prisons for category A and B prisoners deemed to be at higher risk of escape or danger to the public.

Women comprise approximately 5% of the total prison population and are housed in separate prisons from men. Currently there are 13 women’s prisons in England (there are none in Wales). Young offenders (aged 15-21) are housed separately from adults in Young Offender Institutions (YOIs), either in separate wings or prisons. Furthermore, young offenders aged under 18 are held in different buildings from those over 18. There are currently 21 prisons in England and Wales with a YOI function. Because there are fewer of them, YOIs and women’s prisons tend to fulfil multiple functions. This also means that young people and women are more likely to be held in prisons further away from their homes and families.

2.2.2 Characteristics of the prison population

On 30th September 2011, the prison population in England and Wales stood at 87,501 (Ministry of Justice, 2011c). Between 1993 and 2008, there was a rapid increase in the prison population at an average of four per cent a year. However, more recently growth has slowed to an average rate of one per cent a year. The rate of imprisonment in England and Wales is 155 per 100,000 of the population; a rate higher than France, Germany, Spain and Italy (International Centre for Prison Studies, 2011).

As of 30th September 2011 (Ministry of Justice, 2011c), in prisons in England and Wales there were:

- 4,256 women;
- 1,597 15-17 year olds
- 8,317 18-20 year olds and;
- 13,550 remand prisoners.

Prisoners are generally an unhealthy population who have experienced a lifetime of social exclusion, often starting in childhood. In their report on reducing reoffending by prisoners,
the Social Exclusion Unit (SEU) firmly established the link between social exclusion, health and reducing reoffending (Social Exclusion Unit, 2002). The SEU (2002) noted that, compared with the general population, prisoners are:

- 13 times more likely to have been in care as a child;
- 10 times more likely to have been a regular truant;
- 20 times more likely to have been excluded from school; and
- 6 times more likely to have been a young father.

Prior to custody, prisoners commonly experience a range of problems with housing, finances, education and employment. Furthermore, on receiving a prison sentence, many offenders lose their accommodation and jobs, adding to the difficulty of resettling prisoners after release. The Surveying Prisoner Crime Reduction (SCPR) project is a large, longitudinal study of reoffending among adult prisoners in England and Wales sentenced in 2005/06 (Ministry of Justice, 2010a). As part of this study, 1,435 prisoners from 49 prisons participated in a detailed survey about their backgrounds shortly after reception into custody (Stewart, 2008). The study reported that:

- 66% were not in education, employment or training immediately prior to custody (13% had never had a job and 14% were unable to work due to long-term illness);
- 46% had no qualifications;
- 15% reported being homeless immediately prior to custody (sleeping rough or in temporary accommodation); and
- 71% had previously been sentenced to imprisonment (27% had received a prison sentence on 6 or more occasions).

Research has consistently indicated that prisoners have much poorer health than the general population, and suffer from disproportionately high rates of physical illnesses, psychiatric disorders and dependence on drugs and alcohol. Both chronic physical and infectious diseases (such as HIV, hepatitis B and C and tuberculosis) are more common among prisoner populations (Bridgwood & Malbon, 1995; Fazel & Baillargeon, 2011). A landmark study by the Office for National Statistics found that 90% of prisoners had a mental illness, substance misuse problem or both (Singleton et al., 1998). Overall, rates of psychosis are 10 times higher among prisoners than the general UK population (Brugha et al., 2005).
Prisoners also appear to have higher rates of mortality than the general population, both during and following release from custody. After accounting for age differences, suicide rates are approximately five times higher in men and 20 times higher among women in prisons in England and Wales compared with the general population (Fazel & Benning, 2009; Fazel et al., 2005b). Furthermore, the risk of suicide among people recently released from prisons in England and Wales is 8 times higher among men and 36 times higher among women compared with the general population (Pratt et al., 2006). A study of people released from prisons in the USA noted that overall mortality rates were 12.7 times higher than equivalent community populations on release from prison (Binswanger et al., 2007). The leading causes of death were drug overdose, cardiovascular disease, homicide and suicide (Binswanger et al., 2007).

### 2.2.3 Imprisonment as a public health opportunity

As the previous section showed, comparisons between prisoners and the general population are commonly made in the prison health literature. However, this perhaps infers a false dichotomy. A third of men have had a criminal conviction by age 30 (Ministry of Justice, 2010b). Furthermore, most offenders who receive a prison sentence serve relatively short sentences before being returned to the community; in 2010 the average custodial sentence length in England and Wales was 14 months (Ministry of Justice, 2011a). Thus, it is misleading to consider prisons and prisoners as entirely separate from the general population. Rather, as Cumming and Wilson (2010) have argued, “these are often the same people at different times in their lives” (p.40).

Despite having high levels of health need, offender populations often have difficulty in accessing mainstream community health services. In the SCPR survey, newly sentenced men reported relatively low rates of contact with health services in the community in the 12 months prior to custody (Ministry of Justice, 2010a):

- 17% had received help for a mental health or emotional problem;
- 22% had received help for a drug problem;
- 7% had received help for an alcohol problem; and
- 12% were not registered with a GP.
These findings are consistent with patterns of contact among socially excluded groups more generally, who tend to lead chaotic lives and have poor levels of engagement with primary care and preventive health services (Bristow et al., 2011; Department of Health, 2010a). As with socially excluded groups more generally (Bristow et al., 2011), where contact is made with healthcare services, this is more likely to be unplanned and crisis-led. For example, in the SCPR sample almost a quarter (23%) had visited Accident and Emergency in the previous 12 months (Ministry of Justice, 2010a). This type of contact is likely to be more expensive and have poorer health outcomes.

There are a number of reasons why offenders and ex-offenders do not engage well with health services outside of custody (and why health services do not engage well with offenders). Part of the problem may be that offenders often have multiple health needs, though individually these may fall below service thresholds. A recent report by Revolving Doors and Making Every Adult Matter (MEAM) has argued that “most public services are designed to deal with one problem at a time and to support people with single, severe conditions” (Revolving Doors Agency and MEAM, 2011p. 4). Furthermore, many offenders have a history of violence or substance misuse, which can be used as reasons to exclude individuals from community health services, acting as a barrier to care. Consequently, there is a risk that offenders with complex needs might find it difficult to navigate systems and can fall into the ‘gaps’ between services.

Imprisonment can be regarded as a public health opportunity to reduce health inequalities in socially excluded groups. Whilst offenders can be reluctant or unable to engage with healthcare professionals outside of custody, they are frequent users of health services in prison (Feron et al., 2005; Marshall et al., 2001). Thus imprisonment may present a rare opportunity for healthcare professionals to engage a group hard to reach by other means and to engage them in health services. Reed and Lyne present the ideal scenario (1997 p.1033):

“A period in prison should present an opportunity to detect, diagnose and treat mental illness in a population often hard to engage with NHS services. This could bring major benefits not only to patients but to the wider community by ensuring continuity of care and reducing the risk of re-offending on release.”

Conversely, failure to act could result in prisoner populations acting as what Fazel and Baillargeon term “reservoirs of infection and chronic disease” (2002 p.963), increasing the public health burden in the already poor communities to which they return. Revolving
Doors and MEAM have emphasised the imperative to support socially excluded people with multiple needs, arguing that ineffective responses have the potential to cause damage to individuals and families, communities, public services, the public purse and intended government outcomes (Revolving Doors Agency and MEAM, 2011). Increasingly, the government is recognising the links between health, offending and social exclusion; recently, several reports have focused on improving health and social care services in areas highly relevant to offender populations, including reducing alcohol harm, treating drug addiction, improving mental health and responding to people with multiple needs (Bradley, 2009; Darzi, 2008; HM Government, 2012; Patel, 2010; The Future Vision Coalition, 2009).

2.2.4 Equivalence of healthcare for prisoners

“A calm and dispassionate recognition of the rights of the accused against the state, and even of convicted criminals against the state... these are the symbols which in the treatment of crime and criminals mark and measure the stored-up strength of a nation, and are the sign and proof of the living virtue in it.” (Churchill, 1910)

The Prison Medical Service was established in the late eighteenth century, after the 1774 Health of Prisoners Act was passed. Historically, penalty, and, by extension, healthcare for prisoners was framed within the condition of ‘less eligibility’: the idea that prisoners should not live and work in better conditions than those outside the prison walls (Sim, 1990). Critics have argued that, historically, medical interventions in prisons were intertwined with a general preoccupation with discipline, punishment and humiliation (Sim, 1990). Responsibility for employing prison healthcare staff and delivering prison healthcare remained with HM Prison Service until very recently, when it passed to the NHS. Today, prisoners in England and Wales should have access to the same quality and range of health care services as they would expect to receive in the wider community (Health Advisory Council for the Prison Service, 1997). This is known as the ‘principle of equivalence’ and has been the principal driving force behind the most recent wave of prison healthcare reforms (Exworthy et al., 2012).

From an international perspective, references to the principle of equivalence can be found within human rights policy from the early eighties onwards, including United Nations resolution 45/111 concerning the basic principles for the treatment of prisoners (United Nations, 1990), the European Social Charter (Council of Europe, 1996) and recommendation
R (98) issued by the Committee of Ministers of the Council of Europe on the ethical and organisational aspects of health care in prison (Council of Europe, 1998).

After the NHS was established in 1948, calls began to emerge to integrate prison healthcare with the wider NHS (Birmingham, 2003; Sim, 1990). Integration was formally rejected on two separate occasions by the Gwynn Inquiry (Home Office, 1964) and the May Inquiry (Home Office, 1979). However, in the nineties the idea began to gather momentum, during which time there was a surge of interest in service provision for offenders with mental illness (see Figure 1, page 19). In 1990, the Department of Health and the Home Office jointly issued *Home Office Circular 66/90* (Home Office, 1990), which encouraged joint working between agencies in order to divert ‘mentally disordered offenders’ away from the criminal justice system and into health and social care services. This was followed by the Reed Report, a comprehensive review of services for mentally disordered offenders (Reed, 1992, 1993, 1994). The report made 276 recommendations in total, suggesting that contracting in NHS services to prisons could help to bring about further improvement.

Meanwhile, an inquiry led by Lord Justice Woolf in the wake of the 1990 prison riots concluded that instability within the Prison Service could be corrected by a better balance of three crucial elements: security, control and justice, the latter being the right for prisoners to be treated with fairness and humanity (Woolf & Tumin, 1991). The government white paper which followed, *Custody, Care and Justice*, proposed that standards of care in prison should be brought into closer alignment with the NHS, stating that prisoners should, “expect the same standards of health care as those provided by the National Health Service” (Home Office, 1991 p.62).

In 1996, the then Chief Inspector of Prisons, Lord Ramsbotham, issued a paper entitled *Patient or Prisoner?* which recommended the NHS should take on commissioning responsibilities for prison healthcare (HM Inspectorate of Prisons for England and Wales, 1996). The following year, a report by the Health Advisory Committee to the Prison Service reiterated that prisoners should receive equivalent services to the general public (Health Advisory Council for the Prison Service, 1997). This proved to be the tipping point: a joint NHS/Prison Service working group was established to consider the recommendations proposed by these two reports and to consider the practicalities of implementing the proposed reforms. The group’s proposals for reform, published in *The Future Organisation of Prison Healthcare* (HM Prison Service and NHS Executive, 1999), were adopted in 1999 and a formal partnership between the NHS and the Prison Service was accepted by
government in 2000. In April 2003, the process of transferring financial and commissioning responsibilities for prison health services from HM Prison Service to the NHS began. In April 2006, this process was finally completed, arguably signalling the greatest commitment to date by the UK government in securing equivalence of care for offenders.

2.2.5 Section summary

- At any one time, there are over 80,000 prisoners in England and Wales held in a range of prison types, with different levels of security and functions.
- Women and young offenders account for less than 20% of the prison population and are housed separately from adult men.
- Prisoners typically have poorer health than the general population and have complex health and social care needs.
- Imprisonment can be seen as a public health opportunity to reduce health inequalities in a socially excluded group.
- Historically, prison healthcare was regarded as substandard in comparison to the community.
- Nowadays, prisoners are entitled to the same quality and range of health care services as they would expect to receive in the wider community.
- In 2006, the NHS assumed financial and commissioning responsibilities for prison healthcare.
Figure 1: Journey to equivalence

1990
- Home Office Circular 66/90 on the *Provision for Mentally Disordered Offenders* is published, recommending mentally disordered offenders are diverted into health and social care services and away from prison.

1992
- The ‘Woolf Report’ is published, proposing major reforms to the management of prisons, following the 1990 prison disturbances.
- Home Office publishes the white paper *Custody, Care and Justice* recommending closer alignment between standards of care in prison and in the NHS.

1992-4
- Dr John Reed publishes the ‘Reed Reports’, proposing major reforms to services for mentally disordered offenders.

1996
- HM Chief Inspector of Prisons’ consultation paper, *Patient or Prisoner? A new strategy for health care in prisons* is published recommending that the NHS should take over prison healthcare.

1997
- The Health Advisory Committee to the Prison Service publishes *The Provision of Mental Health Care in Prisons*, promoting the concept of equivalence of care.

1999

2000
- The Directorate of Health Care for Prisons at the Home Office is replaced by the Prison Health Policy Unit and the Prison Task Force at the Department of Health.

2003
- Transfer of commissioning and financial responsibilities for prison health care to the NHS begins.

2006
- Transfer of responsibility and funding for prison health services from the Prison Service to the NHS is completed in April 2006.
2.2 Mentally ill prisoners

“Prisons are unremittingly grim places that provide conditions wholly unsuitable for those with severe mental disorders. Despite this, the prison system in England and Wales probably houses thousands of people with serious mental illness and many more with other forms of mental disorder. This no doubt reflects a number of facts: offenders are particularly vulnerable to developing mental health problems; people with mental disorders are vulnerable to imprisonment; imprisonment is detrimental to mental health; and relatively few prisoners with mental illness are transferred to hospital for treatment.” (Birmingham, 2003 p.198)

Unfortunately, the imprisonment of people with mental illness is not a new phenomenon. Over 200 years ago, the well-known English prison reformer, John Howard, noted that (Howard, 1784 p.10-11):

“In some few gaols are confined idiots and lunatics - many of the bridewells [prisons] are crowded and offensive, because the rooms which were designed for prisoners are occupied by lunatics. The insane, when they are not kept separate, disturb and terrify other prisoners. No care is taken of them, although it is probable that by medicines, and proper regiment, some of them might be restored to their senses, and usefulness in life.”

There have been longstanding concerns about the detrimental impact of imprisonment on mental health, especially for offenders with a pre-existing mental illness (Bradley, 2009; Corsten, 2007; Reed, 1992, 1993, 1994). Whilst in recent years there has been an increasing emphasis on diverting the most severely ill individuals away from prison, it is likely that (for the foreseeable future at least) prisons will continue to hold a significant number of people with mental health needs. In this section the prevalence of mental illness in prisons, the health needs of mentally ill prisoners and the services available to treat them will be discussed.

2.2.1 The health needs of mentally ill prisoners

2.2.1.1 Prevalence of mental illness

Several large-scale studies of psychiatric morbidity have been conducted in the England and Wales prison estate over the years in order to estimate demand for services and unmet health needs. Table 1 (see page 25) provides a summary of the key studies since 1990, the measures used and the prevalence rates reported for different psychiatric disorders.
In the early 1990s, a series of studies were undertaken by researchers at the Institute of Psychiatry to establish rates of psychiatric disorder and treatment needs among prisoners (Brooke et al., 1996; Gunn et al., 1991a; Gunn et al., 1991b; Maden et al., 1996; Maden et al., 1994). Large, representative and random samples of prisoners from prisons nationally participated in clinical interviews with psychiatrists (see Table 1 for details). Overall, psychiatric disorders were diagnosed in 40% of adult and 33% of young sentenced men. The most common disorders were substance misuse, personality disorders and neurosis. Higher rates of psychiatric disorder were seen among women (56%–77%) and remand prisoners (53%–77%). Women had similar rates of psychosis to men, but were more likely to suffer from neurotic disorders.

On the basis of clinical diagnoses, medical records and patient preferences, the authors made a number of treatment recommendations for prisoner populations. Among sentenced prisoners, they estimated that 44% of women and 23% of men required some form of treatment, most commonly on an outpatient basis (e.g. psychotherapy or medication) within prison or as part of a therapeutic community (Gunn et al., 1991a; Gunn et al., 1991b; Maden et al., 1994). For a minority of prisoners, suffering from the most severe forms of psychiatric disorder (predominantly psychosis) that could not be adequately treated within prison, they recommended transfer to hospital outside of prison to receive inpatient care.

Birmingham and colleagues (1996) studied male remand prisoners newly received into Durham prison to establish the prevalence of mental disorder and treatment needs. Overall, 26% of men had one or more current mental disorders; this rose to 62% when substance misuse disorders were included. The authors concluded that 30% (n=168) of the sample required some form of psychiatric input including referral to a prison psychiatrist (n=20), transfer to the prison hospital wing for assessment/management (n=34) and in 16 cases, immediate transfer to psychiatric hospital.

In the 1990s, the Office for National Statistics (ONS) conducted a series of surveys to establish the point prevalence of psychiatric morbidity in a range of different settings, including households (Meltzer et al., 1995; Singleton et al., 2001), institutions (Meltzer et al., 2003) and prisons (Singleton et al., 1998). In 1997, a sample of 3142 prisoners (stratified by gender and legal status), from all prisons throughout England and Wales, participated in
the ONS prison survey (Singleton et al., 1998). The study found rates of psychosis (including schizophrenia, bipolar disorder and schizoaffective disorder) were 10% and 7% among male remand and sentenced prisoners respectively, and 14% among female prisoners. The prevalence of neurotic disorders (such as depressive, generalised anxiety, panic and obsessive compulsive disorders) was particularly high: 59% of remand and 40% of sentenced men, and 76% of remand and 63% of sentenced women, had at least one neurotic disorder. The authors concluded that 90% of prisoners had a diagnosable mental illness, personality disorder and/or a substance misuse disorder. The ONS study, though now over a decade old, is still often referred to by researchers and policymakers today (Appleby, 2010; Bradley, 2009).

The study by Shaw et al. (2009c) is the most recent of the studies considered in Table 1. As part of a prospective cohort study undertaken to evaluate prison mental health services, the authors estimated the prevalence of severe and enduring mental illness among prisoners received into custody. A consecutive sample of 3,482 prisoners (including 513 women) in six English prisons were screened for mental illness. Subsequently, all those who screened positive and a 5% sample of those who screened negative were interviewed by trained interviewers (n=1181 in total) using validated clinical assessment tools for mental illness and substance misuse. Taking into account the two-phase sampling design, the authors estimated that approximately 23% of the general prison population had a serious mental illness (psychosis and/or major depression) and two thirds (66%) had a substance misuse problem. Overall, 71% of prisoners were estimated to have a serious mental illness, a substance misuse problem, or both.

In summary, the increased prevalence of mental illness among prisoners has been well-established by studies in the UK (Birmingham et al., 1996; Brooke et al., 1996; Gunn et al., 1991a; Gunn et al., 1991b; Maden et al., 1996; Maden et al., 1994; Shaw et al., 2009c; Singleton et al., 1998). When comparing these figures, however, there are some important methodological differences to bear in mind, in particular the heterogeneity of clinical assessments and tools used (see Table 1) and the differences in training and qualifications of the interviewers. For example, in the ONS study (Singleton et al., 1998), lay interviewers carried out many of the assessments of mental illness. The ONS team have cautioned that “lay interviewer administered measures tend to provide higher prevalence rates for disorders than those that are clinician administered” (Singleton et al., 2001 p.13).
Fazel and Danesh (2002) conducted a systematic review and meta-analysis of 62 studies across 12 western countries, comprising 22,790 prisoners. The authors reported that 4% of male and female prisoners were diagnosed with psychosis; 10% of men and 12% of women in prison were diagnosed with major depression. Overall, they concluded that one in seven prisoners had psychosis or major depression. They found that after accounting for age differences, rates of psychosis and major depression were two to four times higher in prison than in the community. Whilst pooling findings in this manner might have masked considerable heterogeneity in the time periods, methodologies and findings of individual studies, they do confirm a substantial level of mental health need in prisoner populations.

2.2.1.2 Substance misuse

From a clinical perspective, the management of patients with both substance misuse and mental health problems (a ‘dual diagnosis’) presents particular challenges. One issue is that substance misusers may experience psychotic symptoms whilst intoxicated or following withdrawal from substances, particularly hallucinogens and/or stimulants. These may continue beyond the acute phase of intoxication and/or withdrawal. Furthermore, individuals with a primary psychosis might misuse substances to mask symptoms of mental illness or ‘self-medicate’. For these reasons, it may be difficult to distinguish between psychoses and substance misuse and to make an accurate diagnosis (Semple et al., 2005). Consequently, the term dual diagnosis, in the context of substance misuse, may refer to a range of problems including (Department of Health, 2009a):

- A primary mental health problem that provokes the use of substances;
- Substance misuse and/or withdrawal leading to psychiatric symptoms or illnesses;
- A psychiatric problem that is worsened by substance misuse; or
- Substance misuse and mental health problems that do not appear to be related to one another.

Substance misuse is common among individuals with mental illness generally (Menezes et al., 1996; Weaver et al., 2003), and even more common among mentally ill prisoners (Shaw et al., 2009c; Singleton et al., 1998). For example, in a study by Shaw et al. (2009c), 78% of prisoners with serious mental illness also had a drug or alcohol problem. Thus, among
mentally ill prisoners, substance misuse should be regarded as the norm, rather than the exception.

By its nature, responsibility for the care of people with dual diagnosis in prison falls to a range of different health and social care services, including primary care, mental health in-reach services, substance misuse services, chaplaincy and peer support groups. Although practices in individual prisons vary, substance misuse services and mental health services have largely been delivered in parallel, meaning patients have to access services separately. In 2009, A guide for the management of dual diagnosis for prisons was published (Department of Health, 2009a). The guide noted that parallel services, whilst a recognised and accepted model of care for people with dual diagnosis, might increase the risk of miscommunication or of becoming fragmented. More integrated approaches to care were recommended, either by introducing specialist dual diagnosis teams or through greater integration of existing services. It is worth noting that in recent years, the responsibilities of CARAT (Counselling, Advice, Referral and Throughcare) teams and healthcare in treating drug dependence have been brought together under the Integrated Drug Treatment System to deliver better quality, integration and continuity of care.
Table 1: Findings of key studies (post-1990) to establish the prevalence of psychiatric diagnoses in prisoners in England and Wales

<table>
<thead>
<tr>
<th>Authors</th>
<th>Clinical interview measures</th>
<th>Study population</th>
<th>Sample size</th>
<th>Psychosis</th>
<th>Neurosis</th>
<th>Personality disorder</th>
<th>Substance misuse</th>
<th>Any psychiatric disorder</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gunn et al. (1991)</td>
<td>CIS</td>
<td>Sentenced adult men</td>
<td>1,365</td>
<td>2%</td>
<td>6%</td>
<td>9%</td>
<td>23%</td>
<td>40%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sentenced young men</td>
<td>404</td>
<td>&lt;1%</td>
<td>6%</td>
<td>14%</td>
<td>19%</td>
<td>33%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sentenced women</td>
<td>258</td>
<td>1%</td>
<td>15%</td>
<td>16%</td>
<td>31%</td>
<td>56%</td>
</tr>
<tr>
<td>Maden et al. (1996)</td>
<td>CIS</td>
<td>Remand adult men</td>
<td>544</td>
<td>6%</td>
<td>28%</td>
<td>11%</td>
<td>39%</td>
<td>66%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Remand young men</td>
<td>206</td>
<td>2%</td>
<td>19%</td>
<td>12%</td>
<td>36%</td>
<td>53%</td>
</tr>
<tr>
<td>Brooke et al. (1996)</td>
<td>SADS-L</td>
<td>Remand women</td>
<td>245</td>
<td>5%</td>
<td>44%</td>
<td>16%</td>
<td>42%</td>
<td>77%</td>
</tr>
<tr>
<td>Birmingham et al. (1996)</td>
<td>SADS-L, CAGE.</td>
<td>Remand adult men</td>
<td>528</td>
<td>5%</td>
<td>n/a</td>
<td>7%</td>
<td>n/a</td>
<td>62%</td>
</tr>
<tr>
<td>Singleton et al. (1998)</td>
<td>SCAN, CIS-R, SCID-II, AUDIT.</td>
<td>Sentenced men</td>
<td>1,250</td>
<td>7%</td>
<td>40%</td>
<td>64%</td>
<td>63% – alcohol</td>
<td>90%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Remand men</td>
<td>1,121</td>
<td>10%</td>
<td>59%</td>
<td>78%</td>
<td>58% – alcohol</td>
<td>41%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sentenced women</td>
<td>584</td>
<td>14%</td>
<td>63%</td>
<td>50</td>
<td>39% – alcohol</td>
<td>41%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Remand women</td>
<td>187</td>
<td>76%</td>
<td>n/a</td>
<td>n/a</td>
<td>41% – alcohol</td>
<td>54%</td>
</tr>
<tr>
<td>Shaw et al. (2009)</td>
<td>SADS-L, MAST, DAST.</td>
<td>Remand and sentenced men and women</td>
<td>3,482</td>
<td>4%</td>
<td>n/a</td>
<td>n/a</td>
<td>66%</td>
<td>71%¹</td>
</tr>
</tbody>
</table>

Key: CIS - Clinical Interview Schedule (Goldberg et al., 1970); SADS-L – Schedule for Affective Disorders and Schizophrenia Lifetime version (Endicott & Spitzer, 1978); CAGE (Ewing, 1984); SCAN - Schedules for Clinical Assessment in Neuropsychiatry (World Health Organization, 1992b); AUDIT – Alcohol; MAST – Michigan Alcoholism Screening Test (Selzer, 1971); DAST – Drug Abuse Screening Test (Skinner, 1982).

¹ Not including personality disorder.
2.2.1.3 Suicide in prisons

Although suicidal thoughts, behaviours and acts are not in themselves mental disorders, they can be regarded as symptoms of mental distress. Furthermore, many people who die by suicide have a diagnosable mental illness at the time of death, in particular mood disorders or substance misuse (Bertolote & Fleischmann, 2002). Suicide is the leading cause of death in prison: over the period 1990-2011, there were 2872 deaths among individuals held in prisons in England and Wales, 1520 (53%) of which were self-inflicted (Inquest, 2012). One in four prisoners report having ever attempted suicide (Ministry of Justice, 2010a).

After accounting for age differences, suicide rates are approximately five times higher in men and 20 times higher among women in prisons in England and Wales compared with the general population (Fazel & Benning, 2009; Fazel et al., 2005b). Several studies have sought to identify risk factors and characteristics among cases of self-inflicted death in prisons (Fazel & Benning, 2009; Fazel et al., 2008; Fazel & Lubbe, 2005; Fruehwald et al., 2004; Patterson & Hughes, 2008; Shaw et al., 2004). One large systematic review, comprising 34 studies internationally and 4,780 prison suicides, identified a number of demographic, criminological and clinical risk factors, which included: being male, occupation of a single cell, remand status, serving a life sentence, recent suicidal ideation, history of attempted suicide, having a current psychiatric diagnosis, receiving psychotropic medication and having a history of alcohol use problems (Fazel et al., 2008). In England and Wales, a study by the National Confidential Inquiry into Suicide and Homicide by People with Mental Illness examined all self-inflicted deaths in prisons from 1999 to 2007 (Shaw et al., 2011). The authors reported that, despite the increasing prison population, there was a significant decline in the number of suicides in prisons over this period. Among the 766 suicides during this period, 51% of prisoners had a psychiatric diagnosis recorded, most commonly drug dependence and mood disorders. Almost half (48%) had a history of self harm and 47% of suicides occurred within a month of reception into prison. The authors concluded the study confirmed the risk of suicide in prisoner populations, especially those with a psychiatric diagnosis and histories of substance misuse and/or self-harm.

The high rates of suicide observed among prisoners mean that prisons have been considered a key part of national suicide prevention strategy (Department of Health, 2002b). In 1999, Suicide is Everyone’s Concern (HM Inspectorate of Prisons for England and
Wales, 1999) was published in the context of concerns about increasing rates of suicide in prison. Consequently, a commitment to reduce the number of suicides by prisoners by 20% within ten years, translating into 17 fewer deaths per year, was included within The National Suicide Prevention Strategy for England (Department of Health, 2002b) as a key objective. In recent years, a number of strategies have been used to reduce the number of self-inflicted deaths in prison, including:

- Implementation of a revised prisoner suicide prevention and self-harm risk management strategy (HMPS, 2007);
- Improved identification and support for prisoners considered at risk of suicide or self-harm, a key part of which has been the roll-out of the ACCT (Assessment, Care in Custody and Teamwork) approach, which was completed in 2007 (National Institute of Mental Health in England, 2008);
- Changes to the physical environment, including the development of safer cells with fewer ligature points and avoiding placement of prisoners considered at risk of suicide or self-harm in segregation, unless under exceptional circumstances (HMPS, 2007);
- Modernisation of prison mental health services, including the introduction of prison mental health in-reach teams (Department of Health & HMPS, 2001); and
- Changes to the prison culture, including adopting a whole prison approach to suicide prevention and health promotion, viewing the prison as a setting with the potential to actively support health (Department of Health, 2002a).

Latest figures indicate that the government’s target to reduce suicides by 20% by 2012 appears to have been achieved: the three-year average annual suicide rate has decreased from 123 deaths per 100,000 prisoners in 2002 to 71 deaths per 100,000 in 2010 (Ministry of Justice, 2011b). Although we cannot rule out other reasons for this decrease, such improvements suggest that the suicide prevention measures introduced within prisons may have been beneficial. Indeed, recent research has linked decreasing suicide rates in the UK general population with changes to the provision of mental health services, including the introduction of 24-hour crisis teams, policies for dual diagnosis patients and multi-disciplinary reviews after a suicide (While et al., 2012).
2.2.2 Mental health screening

The identification of mental health needs in prison begins at reception. Reception health screening is a statutory minimum requirement for every new prisoner on first reception into custody (HM Prison Service, 2010). The practice dates back 1865, when legislation introduced compulsory medical examination for every new prisoner (Birmingham, 2003). Reception health screening is widely regarded as a key stage in identifying mental health needs and substance abuse problems, and in determining the care that a prisoner will subsequently receive (Birmingham, 2001; Birmingham et al., 2000; HM Prison Service, 2010). Post-reception there may be limited opportunities for healthcare staff to engage with prisoners sufficiently to diagnose mental health problems. Indeed, whilst prisoners with less severe mental health problems may actively seek out help, those most in need may keep a low profile and thus remain undetected (Meiklejohn, 2004).

In terms of primary mental healthcare provision, reception health screening could be seen to fulfil a number of purposes. In the first instance, in line with the principle of equivalence, the prison may use it as a means of ensuring continuity of any healthcare treatment already being received in the community. Secondly, it provides a unique opportunity for healthcare staff to engage an otherwise elusive group in treatment in prison. Despite displaying increased rates of psychiatric morbidity, outside of custody the offender population is often viewed as a ‘hard to reach’, unpopular group who are reluctant or unable to engage with traditionally delivered health services (Birmingham, 2001; Department of Health, 2002a; Harty, 2003). Indeed, offending behaviour and substance misuse can be given as reasons to exclude individuals from community-based healthcare services. Once in prison, however, individuals can be more willing to seek help for health-related problems (Feron et al., 2005; Marshall et al., 2001). Thirdly, prison health screening provides another opportunity to identify those individuals with the most severe needs, in order to divert them away from the criminal justice system into more appropriate healthcare services (Birmingham, 2001).

Despite its perceived importance, the effectiveness of health screening in identifying health problems has in the past been criticised (Birmingham et al., 1996; Grubin et al., 1999). For example, one study of male remand prisoners found that just a quarter of cases of mental illness were identified as a result of prison health screening procedures (Birmingham et al., 1996). Furthermore, screening procedures vastly underestimated drug and alcohol use. Birmingham et al. concluded that the F2169 screening questionnaire was therefore of
‘doubtful validity’ (Birmingham et al., 1996 p.1524). Similar problems were found in women’s prisons (Parsons et al., 2001). Following a review of reception screening procedures by HM Prison Service, a new, shorter health screening tool was developed, piloted and evaluated in a series of field trials in remand prisons, developed in a series of trials by Grubin and colleagues (Grubin et al., 2002; Grubin et al., 1999). The Grubin screen (or the F2169A) was formally adopted by the Prison Service and has been used throughout the prison estate in England and Wales since 2004. The mental health screening questions included in the screening tool are reproduced in Box 1 (page 30).

Recently, however, dissatisfaction with health screening arrangements in prisons has emerged. Some have commented that screening is too often rushed and is regarded as a one-off brief event, rather than a pathway into care (Durcan, 2008). A thematic review of mental health undertaken by the HM Inspectorate of Prisons claimed that information reported during screening was not consistently acted on or followed up (HM Inspectorate of Prisons, 2007). Furthermore, a national survey of prisons undertaken by the Offender Health Research Network (OHRN) reported low levels of satisfaction among respondents regarding the ability of screening to effectively identify mental health problems and the risk of suicide and self-harm (Shaw et al., 2009a). The authors also reported that screening procedures had been modified by approximately half of prisons, without formal evaluation (Shaw et al., 2009a). In summary, studies have revealed a series of issues with mental health screening procedures in prisons in England and Wales, summarised as follows:

- Confusion over the purpose of screening (identifying urgent needs versus a comprehensive health assessment);
- An over-reliance on historical factors, rather than assessing mental state in the ‘here and now’;
- Training deficits, especially in the area of mental health knowledge;
- Pressure on healthcare staff to rush screening, possibly compromising quality; and
- Concerns regarding lack of privacy, the absence of IT systems and cramped, foreboding rooms.

Thus, there is concern that reception health screening may no longer be effective in identifying mental health problems and could be ‘failing to pick up the extent or diversity of need’ (HM Inspectorate of Prisons, 2007 p.6). The Bradley report has recommended that an evaluation of the current prison health screen should be undertaken (Bradley, 2009).
**Box 1: Mental health screening questions on reception in prisons (items 9-12 of the F2169A)**

9. Have you ever seen a psychiatrist outside of prison?  
   No □ Yes □
   - If yes, what was the nature of the problem?
   - Have you ever stayed in a psychiatric hospital? Detail most recent discharge date and name of hospital/consultant.
   - Do you have a psychiatric nurse or care worker in the community? Who, and where?

10. Have you ever received medication for any mental health problems?  
    No □ Yes □
    Answer yes if antidepressants or antipsychotics.
    - If yes, when and what?
    - If current, what dose?

11. Have you ever tried to harm yourself?  
    No □ Yes (in prison) □ Yes (outside prison) □
    Details of most serious and most recent.

12. For some people coming into prison can be difficult, and a few find it so hard that they may consider harming themselves. Do you feel like that?  
    No □ Yes □

*If yes to questions 11 or 12 consider opening a [self-harm/suicide warning form].*

*Record your impression of the prisoner’s behaviour and mental state.*

*If nil of note, please document.*

**IF YES TO QUESTIONS 9 - 11 REFER TO MENTAL HEALTH NURSE FOR PSYCHIATRIC ASSESSMENT.**

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2.2.3 Primary and secondary mental healthcare services

The publication of *Changing the Outlook* (Department of Health & HMPS, 2001) can be regarded as the starting point for the modernisation of prison-based mental health services in line with the standards and commitments set out in the wider NHS. A key aspect of this report was that it acknowledged the majority of mentally ill prisoners were not so ill that
they required inpatient care; this signalled a change of emphasis from treating patients on prison healthcare wings to delivering more services on ‘normal location’ on residential wings, as they would be in the community.

*Changing the Outlook* outlined the roles of primary and secondary care services in treating prisoners with mental illness. Services in primary care in prisons were intended to mirror those available in the community through general practice, including diagnosing mental health problems and facilitating access to further care, incorporating activities such as; identification of care management plans (including, where appropriate, prescribed medication); provision of wing-based support; advising on coping strategies and anxiety management; referral to specialist psychiatric services for further assessment and/or support; and chronic disease management.

*Changing the Outlook* announced multi-disciplinary mental health ‘in-reach’ teams, modelled on Community Mental Healthcare Teams (CMHTs), as the main vehicle for delivering specialist mental healthcare services in prisons. In the community, CMHTs provide multidisciplinary, community-based care for adults using a wider range of interventions. In-reach teams, like CMHTs, were set up to perform a range of tasks including identifying and assessing those with mental illness, improving access to appropriate treatment, discharge planning and facilitating effective throughcare on release. Like CMHTs in the community (Simmonds *et al*., 2001; Thornicroft *et al*., 1999), in-reach teams were initially intended to focus on severe and enduring mental illness, although there was recognition that others may also benefit from such services (Department of Health & HMPS, 2001).

In 2009, Shaw and colleagues published the findings of a national evaluation of prison mental health in-reach services (Brooker & Gojkovic, 2009; Shaw *et al*., 2009c). As part of the evaluation, a prospective cohort study of prisoners entering custody was undertaken. Over 3,000 prisoners were screened for mental illness using a validated screening tool. Subsequently, on the basis of screening outcomes, a subgroup of participants were assessed for mental illness (n=1181). The records of all those with a diagnosable mental illness were then tracked for one month to determine whether contact was made with prison mental health services. The authors reported that just 25% of prisoners with severe and enduring mental illness received mental health assessments by in-reach teams in prison; furthermore,
just 13% of prisoners with severe and enduring mental illness were accepted onto caseloads. As part of the evaluation, the authors also undertook a cross-sectional study to determine the characteristics of prisoners on in-reach caseloads. This revealed that only 40% of prisoners had a current severe and enduring mental illness.

Qualitative studies have reported that in-reach is generally perceived to be a positive development by prison healthcare staff, discipline staff and prisoners (Brooker & Gojkovic, 2009; Brooker, 2005; Mills, 2002; Shaw et al., 2009a), some of whom have described dramatic improvements in the quality of mental healthcare within prisons (Shaw et al., 2009a). Yet, the findings of Shaw et al. (2009a) indicate that, despite the introduction of in-reach teams, the vast majority of mental illness went undetected and untreated in prison. This is arguably a disappointing finding, especially given that Birmingham found similar detection rates over a decade previously, well before in-reach teams were established (Birmingham et al., 1996).

The findings of questionnaire surveys, case studies and qualitative work have pointed towards a series of interrelated problems which may shed light on these findings. Whilst, in principle, in-reach is widely considered to be an excellent idea, those on the frontline think the initiative has been poorly resourced and implemented (Shaw et al., 2009c). One serious problem identified by research has been the quality of triage. In prison, in-reach teams are largely reliant on referrals, the majority (57%) of which come from primary healthcare staff who undertake reception health screening (Shaw et al., 2009c). However, in a survey of in-reach team leaders, 67% of respondents said that triage by prison primary care was inadequate (Shaw et al., 2009c). The three most common reasons identified for this were a lack of primary care staff (78% of respondents), inadequate funding (64%) and inadequate systems and expertise (64%). These findings are consistent with concerns in the wider literature regarding the effectiveness of reception health screening and level of funding available for mental health services in prisons (Brooker et al., 2008; Shaw et al., 2009a). Indeed, a report by the Sainsbury Centre for Mental Health concluded that whilst more is spent per head on prison mental health services than on the general population, there were only sufficient resources to meet a third of the level of need required to deliver equivalence (Brooker et al., 2008).
This also highlights a related issue, concerning primary mental healthcare in prisons. In mainstream mental health services, approaches are recommended which match individuals to appropriate levels of intervention, according to the severity of their needs. In the community around 80% of mental health care is provided through primary care services (Bradley, 2009). Research suggests that the situation in prison should be broadly similar. For example, one study in a large local prison found that the majority of mental health need could be safely and adequately treated in primary care (Senior, 2005). However, developments in primary care have lagged behind services for people with more severe mental health needs. Thus, in-reach services have not been supported by the full range of primary care and specialist services available in the community, such as psychological therapies, assertive outreach and crisis teams. Thus, despite not having the capacity to treat their intended client group, in-reach teams have been prompted to broaden their remit to take on those with any mental disorder, a sign of what Steel et al. (2007) call ‘mission creep’. This could explain why, in the study by Shaw et al. (2009c), such a high proportion of prisoners on in-reach caseloads did not have a current severe and enduring mental illness.

To summarise, a combination of factors has meant that in-reach teams have been unable to focus on individuals with more severe mental health problems, as they were intended to do. It is interesting that confusion over the purpose and role of CMHTs has also been found in the community, suggesting the problem may not be unique to prisons (Chew-Graham et al., 2007). In-reach teams, whilst welcome additions to prisons, are but “one element in a complex and rapidly changing landscape” (Steel et al., 2007 p.374). Yet, they have often been expected to take on the full burden of mental health provision in prisons (Brooker, 2005). In conclusion, Shaw et al. (2009c) acknowledge the importance of achieving a more effective balance between primary and secondary mental healthcare services in prisons:

“In order to achieve the goal of equivalence, there needs to be a comprehensive system of primary and secondary mental healthcare services in prison to enable each part of the system to target appropriate clients and thus function appropriately.” (p.138)

These sentiments have been echoed in Lord Bradley’s review of mental illness in the criminal justice system, which stated that more robust models of primary mental healthcare services need to be developed in prisons, with an appropriately skilled workforce (Bradley, 2009).
2.2.4 Inpatient care, specialist settings and transfer to hospital

In addition to wing-based mental health services, many prisons also have 24-hour inpatient facilities within their healthcare wings. Although inpatient beds on healthcare are also used to provide care for prisoners with physical ailments, in practice, many of these beds are used to house mentally ill prisoners who for reasons of risk or safety cannot be treated on normal residential wings.

Healthcare wings may also include a proportion of prisoners awaiting transfer to hospital for treatment of acute mental illness. Prisons are not hospitals and are not recognised as such under the Mental Health Act; therefore, patients cannot be treated without consent in prison. Prisoners who are too ill to be treated in prisons or need to be detained under the Act have to be transferred to hospital, following psychiatric assessment, as they would in the community. For a variety of reasons, including a lack of secure beds and poor communication between prisons and hospitals, the transfer process has, historically, been slow and problematic. Hence, prison healthcare wings have been described as “a limbo between the community of the prison and the hospital beds of the NHS and independent sector” (Wilson, 2004a p.5). One audit (unpublished) showed that, at any one time, there were on average 282 prisoners awaiting initial psychiatric assessment (Bradley, 2009). In a bid to effect more timely transfers, the Department of Health have recently piloted an initiative to compete transfers within 14 days (Shaw et al., 2008). Lord Bradley and others have agreed that the 14 day target is reasonable and should be rolled out throughout the prison estate (Bradley, 2009; Royal College of Psychiatrists, 2011; Shaw et al., 2008).

There are also some specialist residential facilities within the prison estate for offenders with more severe forms of personality disorder. For a proportion of offenders with more severe forms of personality disorder, whose offending behaviour is associated with their mental illness, it can be especially difficult to meet their health and social care needs whilst simultaneously satisfying the requirement to protect the public. Prisoners with personality disorders who are serving longer sentences can be transferred to HMP Grendon. HMP Grendon is a relatively small establishment (capacity of 235 prisoners), which is run as a series of therapeutic communities, offering intensive group work and psychotherapy designed to challenge offending behaviour. In this respect it is a unique establishment within the prison estate, and indeed in Europe. Opened in 1962 as an experimental prison, the prison appears to have had good results (Robertson & Gunn, 1987).
In 2005 the Ministry of Justice and the Department of Health piloted a new initiative aimed at prisoners with Dangerous and Severe Personality Disorder (DSPD), who potentially pose a risk of harm to others. The DSPD programme has pilot programmes at a number of sites, including high-security prisons, high-security hospitals, medium secure units, and a programme at a women’s prison (HMP Low Newton). Currently, there are approximately 350 treatment places. To be accepted onto the programme, assessment of individuals has to satisfy three criteria: a) severe personality disorder; b) likelihood of further offending leading to serious, unrecoverable harm; and c) a link between the two. Whilst it is too soon to evaluate long-term reoffending outcomes, economic and process evaluations of the programme have been completed. Whilst some aspects of the ‘DSPD experiment’ have been regarded as a success, including investment on services and research in a neglected population, Tyrer et al. (2010) have noted a number of problems, including the dominance of the public protection agenda, inadequate levels of patient satisfaction and the validity of the DSPD diagnosis itself.

2.2.5 Section summary

- Rates of mental illness are very high in prison, especially among women and remand prisoners.
- The majority of prisoners with mental illness also have a coexisting substance misuse problem.
- Rates of suicide are very high in prison, particularly among prisoners with a mental illness.
- Although, there is a growing range of primary and secondary mental healthcare services in prison, studies have found that the vast majority of mental illness goes undetected and untreated in prison.
- There have been several calls to improve primary care services in prisons in order to take pressure of specialist mental health ‘in reach’ services.
- Prisoners with more severe forms of mental illness, which cannot be safely and adequately treated in prison, can be transferred to a hospital outside of prison.
2.3 Psychotropic medicines

Definitions of psychotropic medicines vary in the literature. For the purposes of this thesis, psychotropic medicines are defined as any medicine listed in chapters 4.1-4.4 of the British National Formulary (BNF) which include:

- Hypnotics and anxiolytics (chapter 4.1);
- Drugs used in psychoses and related disorders (4.2);
- Antidepressant drugs (4.3); and
- Central Nervous System (CNS) stimulants and drugs used for attention deficit hyperactivity disorder (4.4).

In the following sections, an overview of the drugs included within each of these four categories, and their clinical uses, is provided. This is followed by a discussion of the criticisms of, and alternatives to psychotropic medicines in the treatment of mental illness. Understanding the ways in which psychotropic drugs work, their limitations and their position within the broader care of people with mental illness is necessary contextual information for developing an understanding of the use of psychotropic medicines in prisons.

2.3.1 Hypnotics and anxiolytics (4.1)

Hypnotics are generally used to relieve insomnia whilst anxiolytics are effective in the relief of acute anxiety, tension and agitation. The group of drugs known as the benzodiazepines are the most commonly used hypnotics and anxiolytics (BNF, 2010). The main difference between different benzodiazepine drugs are the variation in the half lives (the period of time for the blood concentration of a substance to decrease by half). Half lives are clinically relevant as longer acting benzodiazepines (e.g. diazepam) are commonly used as anxiolytics, whilst those with shorter half lives are more often used as hypnotics (e.g. temazepam). Certain benzodiazepines, particularly diazepam and chlordiazepoxide, can also be used as an adjunct for alcohol withdrawal.

Though benzodiazepines are effective, they carry the risk of physical and psychological dependence. Users can rapidly develop tolerance, where greater doses are required to achieve the same effects. Furthermore, after longer periods of continuous use (over four
weeks), withdrawal symptoms have been reported, including insomnia, anxiety, flu-like symptoms, stiffness or weakness and possibly seizures (BNF, 2010; Taylor et al., 2009). Users may even misinterpret discontinuation symptoms as signs of relapse (Chadwick & Bressington, 2009). Thus, gradual withdrawal regimes are recommended, preceded (if necessary) by switching shorter acting drugs to equivalent doses of diazepam (BNF, 2010; Department of Health, 2007; Taylor et al., 2009). Furthermore, benzodiazepines, particularly shorter-acting drugs, can be misused for recreational purposes either alone or in combination with other street drugs such as opiates or stimulants (Department of Health, 2007; Taylor et al., 2009).

For such reasons, there is widespread concern regarding the use of benzodiazepines in the community. Data from the Prescription Pricing Authority has shown that although benzodiazepine prescribing has declined somewhat, large quantities are still being issued in quantities indicative of long-term use (National Prescribing Centre, 2005a). Furthermore, prescriptions for the newer hypnotics, the ‘Z-drugs’ (zaleplon, zolpidem and zopiclone), have increased. The Z drugs are non-benzodiazepine hypnotics, which are licensed for the treatment of insomnia. These are structurally different from benzodiazepines, but act at the same receptor, and were developed with the intention of overcoming some of the adverse aspects of benzodiazepines, such as dependence. However, after reviewing the available evidence, the National Institute of Health and Clinical Excellence (NICE) concluded that there were no clinically useful differences between the Z-drugs and shorter acting benzodiazepine hypnotics with respect to effectiveness or potential for dependence or abuse (NICE, 2004).

In consideration of the risk of dependence and tolerance, NICE has recommended that benzodiazepines are indicated only in cases where symptoms are severe, disabling or causing extreme distress and after non-pharmacological methods have been considered (NICE, 2004). Furthermore, where hypnotic drugs are used, treatment should be at the lowest dose possible for short periods only (2-4 weeks; NICE, 2004). Benzodiazepines are not recommended for chronic conditions, such as General Anxiety Disorder (GAD), Post Traumatic Stress Disorder (PTSD) or Obsessive Compulsive Disorder (OCD), except as a short-term measure during crises (NICE, 2005a, 2005b, 2011). In particular, it has been suggested that repeat prescriptions should be avoided in patients with a history of
2.3.2 Drugs used in psychoses and related disorders (4.2)

Antipsychotic drugs, also referred to as neuroleptics, are used in the treatment and prophylaxis of schizophrenia, bipolar disorder and other psychoses. They also have a calming effect on agitated or disturbed patients. Antipsychotic drugs have been grouped according to both the pattern and mechanism of clinical action (Mailman & Murthy, 2010). The therapeutic effects of the first antipsychotic drug, chlorpromazine, were discovered serendipitously in 1952 (Delay et al., 1952). This breakthrough led to the development of a group of chemically related medicines, known as the first generation or ‘typical’ antipsychotics, which include haloperidol, zuclopenthixol and flupentixol. The BNF (2010) identifies four categories of neurological ‘extrapyramidal’ side effects (EPSEs) associated with first generation antipsychotic medications: parkinsonian symptoms (e.g. tremors); abnormal face and body movements (dystonia); restlessness; and tardive dyskinesia, a potentially irreversible condition characterised by involuntary facial contortions, commonly involving the tongue, face and jaw. Subsequently, newer generation (‘atypical’) drugs were launched in the 1990s, which avoided EPSEs, making antipsychotics more tolerable. The first of these was clozapine, followed by other drugs including risperidone, olanzapine and quetiapine. Whilst first generation antipsychotic drugs are thought to work by interfering with dopaminergic transmission in the brain, second generation drugs have a ‘rich pharmacology’ (Roth et al., 2004), meaning they act on multiple receptors (Bymaster et al., 1996). More recently, a third generation of antipsychotic drugs, with different pharmacological properties, has been introduced (Mailman & Murthy, 2010). Aripiprazole was the first of these drugs to come onto the market. For the purpose of this thesis, second and third generation antipsychotic drugs have been grouped together and will be referred to as atypical antipsychotics.

Substantial research has been focused on comparing the different antipsychotic drugs, both between and within atypicals and typical groups (Jones et al., 2006; Lieberman et al., 2005; McEvoy et al., 2006). Clozapine is the only drug found to be superior in efficacy to typical antipsychotics (Wahlbeck et al., 1999). Though not first line, clozapine has emerged as the gold standard treatment for patients with ‘treatment resistant schizophrenia’ (McEvoy et al., 2006; NICE, 2009b), whose illness has not responded to at least two different
antipsychotic drugs, including an atypical antipsychotic agent (NICE, 2009b). Clozapine can cause agranulocytosis, a serious, acute condition involving a lowered white blood cell count. Therefore, patients prescribed clozapine require regular blood monitoring and must be registered with the UK Clozaril® Patient Monitoring Service in order to manage this risk. Notwithstanding the exception of clozapine, there appears to be little to choose from between the types of individual antipsychotics in terms of effectiveness, although response and tolerability varies between individual patients (Taylor et al., 2009). NICE has recommended that atypical antipsychotics should normally be used first-line when treating newly diagnosed schizophrenia (NICE, 2009b). However, choice of drug may require an individualised approach, taking into account response to treatment, patient preferences and side-effect profiles (Falkai, 2008). There are high rates of medication discontinuation among patients treated with antipsychotics. In a recent high-profile randomised controlled trial (RCT) which compared the efficacy of a range of antipsychotics, only 20–30% of the 1061 patients continued their randomly assigned medication for 18 months (Lieberman et al., 2005). Side effects are a common reason why people stop treatment (Chadwick & Bressington, 2009; Lieberman et al., 2005). Side effects are generally dose dependent and drug-specific. Whilst newer antipsychotics generally have a lower propensity for causing EPSEs, they do vary (Weiden, 2007). Side effects associated with atypical antipsychotics include drowsiness, apathy, confusion and agitation (BNF, 2010). In particular, there is concern regarding the metabolic side effects associated with atypical drugs, especially olanzapine (Meltzer & Bobo, 2006; Tandon et al., 2007). Patients with schizophrenia are more likely to suffer from cardiovascular disease (Goff et al., 2005), which has been identified as a leading cause of death among this population (Brown, 1997). Evidence also suggests that schizophrenia is a ‘life shortening’ disease. A USA study reported that patients with serious mental illnesses (including psychoses and major depressive disorder) lost decades of potential years of life, ranging from 13 to 30 years (Colton & Manderscheid, 2006). The precise causes of excess mortality risk are not fully known, but are thought to include a combination of long term psychotropic medication use, biological and lifestyle factors (Brown et al., 2000; Lambert et al., 2003): indeed, compared with the general population, smoking, obesity and poor diet are all more common among people with schizophrenia (Lambert et al., 2003). It has been argued that risk can be decreased by more active screening and health monitoring (Brown et al., 2000; Meyer, 2010). Thus, NICE guidance recommends that the physical health of people with schizophrenia should be monitored at least yearly (NICE, 2009b).
Drugs to treat mania, also referred to as mood stabilisers, are used in the treatment of hypomania, mania and bipolar disorder (sometimes in combination with an antidepressant, if presenting with depression) to reduce the severity of symptoms, stabilise mood and as a preventive measure. In the UK, lithium, valproate and certain antipsychotics (olanzapine, quetiapine, and risperidone) are licensed for the treatment of acute mania. NICE recommends valproate as a first-line treatment for acute episodes of mania, which is characterised by periods of overactive, disinhibited behaviour (NICE, 2006). In such cases, RCTs have shown that valproate has a response rate of 50% (Taylor et al., 2009). Lithium has a slower onset of action than valproate and antipsychotics, but is regarded as a useful treatment for moderate symptoms of mania. Both valproate and lithium can be used as a long-term prophylaxis for bipolar disorder. Lithium has a narrow therapeutic/toxic window and therefore serum-lithium concentrations among patients taking lithium have to be monitored carefully. Side effects of certain medicines used to treat mania include tremors, weight gain and gastric irritation (BNF, 2010). Furthermore, valproate can cause birth defects and should not normally be prescribed for women of child-bearing age (NICE, 2006).

2.3.3 Antidepressant drugs (4.3)

The antidepressants are used mainly to treat symptoms of depression and anxiety. Antidepressants can also be used in combination with antipsychotics and drugs to treat mania, bipolar disorder and psychotic depression. The concept of symptom severity is central to the treatment of depression. Whilst antidepressants have been found to be beneficial in treating moderate to severe depression, they are not recommended for mild depression (NICE, 2009a). Psychosocial or psychological therapies are usually recommended, rather than antidepressants, for the treatment of mild to moderate depression (NICE, 2009a). Furthermore, antidepressants are frequently used in combination with psychosocial or psychological therapies to treat moderate to severe forms of depression2. Approximately half of patients with at least moderately severe depression will respond to antidepressants (Anderson et al., 2008). Unfortunately, the risk of recurrent depression is high: over half of patients who have a depressive episode will go on to have a second episode (Anderson et al., 2008). However, a meta-analysis of 31 trials showed that

2 See section 2.3.6 for more detailed discussion of the role of psychological and psychosocial therapies.
continuing antidepressant treatment after remission reduces the odds of relapse by 70% (Geddes et al., 2003).

In the BNF, antidepressant drugs are divided into four classes: selective serotonin reuptake inhibitors (SSRIs), tricyclics (TCAs), monoamine-oxidase inhibitors (MAOIs) and other drugs (BNF, 2010). TCAs were the first antidepressants to be introduced. There is little difference in terms of efficacy between the different groups of antidepressants (BNF, 2010). A flexible approach is recommended when choosing antidepressant drugs, taking into account risk of interactions, side effect profiles, and patient preferences. NICE has recommended that the newer SSRI drugs (e.g. fluoxetine, citalopram and sertraline) should normally be used first-line as they are safer in overdose and more tolerable than other antidepressants (NICE, 2009a). Side effects can include sedation, weight gain and sexual dysfunction (Taylor et al., 2009). Furthermore, a series of case reports published two decades ago (Teicher et al., 1990) sparked concern regarding a possible link between SSRIs and suicidal thoughts and behaviour, though this remains to be conclusively proven or disproven (Healy, 2003; Healy et al., 1999; Khan et al., 2003; MHRA/CSM expert working group, 2004). Nonetheless, healthcare professionals have been advised to monitor patients carefully and regularly in the early stages of treatment (MHRA/CSM expert working group, 2004). Whilst not addictive, it has been known for years that patients may experience unpleasant effects on reducing, missing doses or stopping antidepressants, such as dizziness, mood changes, gastrointestinal disturbances and insomnia (Dilsaver & Greden, 1984). Thus, it is recommended that doses are tapered gradually over a period of weeks on stopping to avoid discontinuation effects (Anderson et al., 2008; MHRA/CSM expert working group, 2004).

2.3.4 Central nervous system stimulants and drugs used for attention deficit hyperactivity disorder (4.4)

This chapter of the BNF includes the amphetamines and other stimulant medicines, mainly used to treat attention deficit hyperactivity disorder (ADHD). In the Diagnostic and Statistical Manual of mental disorders (DSM-IV), ADHD has been defined as a “persistent pattern of inattention and/or hyperactivity-impulsivity that is more frequently displayed and is more severe than is typically observed in individuals at comparable level of development” (American Psychiatric Association, 1994 p.85). Methylyphenidate, atomoxetine and dexamfetamine are normally the drugs of choice in ADHD. Since at least some symptoms have to have been present before age 7, ADHD is normally diagnosed in childhood.
However, adult ADHD is a recognised condition (American Psychiatric Association, 1994; NICE, 2008; World Health Organization, 1992a). Furthermore, in a significant proportion of children, symptoms will persist throughout their twenties. For such reasons, drug treatment started in childhood may still be appropriate in adults (although initiating treatment in adulthood is unlicensed). Nonetheless, drugs within this class have a high propensity for diversion, abuse and dependence (Morton & Stockton, 2000). Indeed, the effects of methylphenidate have been compared to cocaine, although there are distinct pharmacological differences between the two (Volkow et al., 1995). Thus, where there is a history of substance misuse, prescribers should be cautious about prescribing and additional monitoring may be required (BNF, 2010).

2.3.5 Critical perspectives on mental illness, psychiatry and psychotropic medicines

The notion of disease has been described as a slippery concept (Smith, 2002). From one perspective, diseases may be regarded as objective, observable phenomena; alternately, disease could be seen as a socially constructed means of control (Foucault, 1973). Even the Oxford Handbook of Psychiatry admits that whilst models of disease are considered the most useful “it may be that ‘disease’ is a concept which will tend to change over time and has no real existence in itself” (Semple et al., 2005 p.4). As the social critic Ivan Illich (1976 p.112) observed:

“Each civilization defines its own diseases. What is sickness in one might be chromosomal abnormality, crime, holiness, or sin in another.”

Since the microbiological revolution in the nineteenth century, the biomedical model has dominated medicine, with a focus on identifying, diagnosing and treating the physiology of diseases. However, the causation and treatment of mental illnesses are less well understood than in other areas of medicine (Semple et al., 2005). Psychiatrists and other mental health practitioners rarely observe the organ they treat, namely the brain. The focus is on determining abnormalities in brain function rather than structure, based on patterns of symptoms (Semple et al., 2005).

Psychiatry is often seen as a ‘Cinderella speciality’ in medicine (Lovett, 2002), a marginalised area of healthcare viewed as low priority. The validity of many mental disorders have been questioned over the years. For example, a 1979 survey found that a significant proportion of doctors and academics did not regard conditions such as depression, schizophrenia and
alcoholism as valid diseases (Campbell et al., 1979). Furthermore, the dividing lines between diagnostic categories and what is considered ‘normal’ and ‘abnormal’ are always changing. Debates still continue among psychiatrists about the nature of mental illness, for example whether mental disorders are best conceptualised as categories or dimensions (Goldberg, 2000). To date, there have been four versions of the Diagnostic and Statistical Manual of Mental Disorders (American Psychiatric Association, 1994), with a fifth in development. Furthermore, there is increasingly recognition that even conditions outside of such formalised criteria can be disabling and distressing. NICE adopted DSM-IV criteria in the most recent guidance on the treatment and management of depression in adults (NICE, 2009). Yet, NICE has recognised that even subthreshold depressive symptoms can still be disabling and distressing if persistent and has therefore covered such cases (NICE, 2009).

Historically, a significant source of criticism of psychiatry and its methods has come from the ‘antipsychiatry’ movement. This movement gathered momentum in the sixties and argued that mental illness was a myth, diagnoses were vague and unscientific, and many ‘therapeutic’ practices were harmful and oppressive. Some sociologists, notably Foucault and Goffman, contributed by criticising the powerful role of psychiatry in society and in ‘total institutions’ such as psychiatric hospitals and prisons (Foucault, 1975; Goffman, 1961). Whilst the notion that psychiatry is a pseudo-science may no longer have any real currency (in the mainstream literature at least), the antipsychiatry movement has been credited with identifying some genuinely problematic aspects of practice, such as institutionalisation and the stigma caused by labelling individuals with psychiatric diagnoses (Semple et al., 2005).

In more recent years, many of the challenges directed at psychiatry have been targeted at the use of psychotropic drugs, particularly the antipsychotics (Breggin, 1991). A major focus of concern has been on the iatrogenic (drug induced) effects on health caused by psychotropic medication. Indeed, in addition to well-established side effects, psychotropic medications have been associated with increased risk of serious, potentially life threatening conditions, including stroke (Douglas & Smeeth, 2008) and diabetes (Smith et al., 2008), although robust prospective studies are lacking in this area (Haddad, 2004). Critics have also drawn attention to the harms caused by psychotropic prescribing, arguing that these medications often harm as well as heal. For example, the link between SSRIs, suicide and violent behaviour has been highlighted as one of the potential dangers of prescribing (Breggin, 2004).

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3 The use of this term has been disputed by critics (Szasz, 2008).
Others have claimed that assertions regarding the efficacy of psychotropic drugs are often misleading or exaggerated (Middleton & Moncrieff, 2011; Moncrieff, 2006b). For example, despite the promotional literature distributed by drug companies, a recent paper has exposed the fragility and inconsistency of evidence linking serotonin and depression (Lacasse & Leo, 2005). In considering the nature of psychotropic drugs, Montcrieff (2010) distinguishes between disease-centred and drug-centred models of drug action, summarised in Table 2 below. According to Montcrieff, in the mainstream disease-centred model, psychotropic drugs are believed to help correct an abnormal brain state by treating the underlying disease. In contrast, the drug-centred model views drugs as psychoactive substances, which create an altered ‘drug induced’ mental state, as do substances such as alcohol and street drugs. From the perspective, this state of ‘intoxication’ produces a global neurological condition, rather than targeting symptoms specifically, and is how any therapeutic effects are derived. Moncrieff (2010 p.4) concludes that:

“Although there are good reasons to think that antipsychotic drugs (and possibly other sorts of drugs) may be helpful in suppressing symptoms in the short term, we are less certain that those benefits will be maintained in the long term.”

Table 2: Alternative models of drug action (Moncrieff, 2010 p.3)

<table>
<thead>
<tr>
<th>Disease-centred model</th>
<th>Drug-centred model</th>
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<tbody>
<tr>
<td>Drugs help correct an abnormal brain state</td>
<td>Drugs create an abnormal brain state</td>
</tr>
<tr>
<td>Therapeutic effects of drugs derived from their effects on an underlying disease process</td>
<td>Therapeutic effects derive from the impact of the drug-induced state on behavioural and emotional problems</td>
</tr>
<tr>
<td>Paradigm: insulin for diabetes</td>
<td>Paradigm: alcohol for social anxiety</td>
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</table>

Critics of psychotropic medication have also drawn attention to a question of importance: who stands to gain (and lose) from the use of these medicines? Some have expressed concerns that the healthcare industry (including regulatory authorities, academic research and clinical practice) is too influenced by pharmaceutical companies (‘Big Pharma’), who make enormous profits from selling psychotropic drugs (Sharfstein, 2005). Furthermore, some believe that the actions of the pharmaceutical industry has encouraged what has been termed the ‘medicalisation of society’ in which there are increasing numbers of diagnoses and treatments and an ‘epidemic’ of psychotropic prescribing (Conrad, 2007). Indeed, psychotropic prescriptions have doubled among those diagnosed with mental illness, use of talking therapies has not changed (Brugha et al., 2004). These concerns are not necessarily limited to a critical minority. In 2005, the findings of an all-party UK House of Commons
inquiry by the Health Committee into the influence of the pharmaceutical industry were published. Highlighting the industry’s dominant influence on research, prescribers, patients and regulators, the report concluded that systemic failings had led to certain medicines (including SSRIs) being “indiscriminately prescribed on a grand scale” (House of Commons Health Committee, 2005 p.100) and that in society generally there was an “unhealthy over-reliance on, and an over-use of, medicines” (p.101). In the UK, the Department of Health is responsible for promoting both the competitiveness of the pharmaceutical industry and the health of the public via the NHS (House of Commons Health Committee, 2005). In recognition of these competing interests, the Health Committee recommended that, in the interests of the public, responsibility for representing the interests of the industry should be transferred from the Department of Health to the Department of Trade and Industry: this was, however, subsequently rejected by the UK Government (2005) on the grounds that the interests of patients and the industry are not exclusive. Some have expressed concerns that public health might not be given sufficient priority if it conflicts with the commercial interests of pharmaceutical companies (Abraham, 2005).

2.3.6 Psychological therapies and alternatives to psychotropic medicines

The previous sections have shown that whilst many people do benefit from psychotropic medicines, they do not work for all people with mental illness and thus should not be regarded as a panacea. Furthermore, as the Maudsley prescribing guidelines admit, “medicines may treat symptoms but not the underlying cause” (Taylor et al., 2009 p.157). People with mental illness often feel there is too much focus on symptoms and medication (NIMHE, 2008). Furthermore, in some people medicine taking can erode feelings of self-control and provoke feelings of guilt or shame (Khan et al., 2007). Though important, psychotropic medicines are just one aspect of care for people with mental illness. This section will briefly consider the use of psychological therapies for mental illness which may be used as alternatives or adjuncts to psychotropic medicines.

Talking therapies are a major element of the UK government’s new mental health strategy, *No health without mental health* (Department of Health, 2011a). In a supporting document published alongside the strategy (Department of Health, 2011b), the government has outlined plans to invest approximately £400 million in talking therapies over a four year period, enabling an estimated 1.2 million people to access services. Improving Access to
Psychological Therapies (IAPT) is a core component of these plans, targeted primarily at people with depression and anxiety disorders (including PTSD, panic disorder and social phobia). IAPT was intended to enable PCTs to implement NICE clinical guidelines that strongly support the use of certain psychological therapies (NICE, 2005a, 2005b, 2009a, 2011). Layard et al. (2007) also established an economic basis for IAPT, arguing that if treatments could improve rates of employment and reduce incapacity benefit costs, service costs could potentially be recouped within as little as two years. Thus, IAPT services were created to form a realistic first-line treatment for people with common mental health problems that could be offered as an alternative to, or in combination with, medication. In light of the evidence that a proportion of patients respond to low-intensity interventions, IAPT follows a ‘stepped care’ model. Stepped care is based on the principle that patients should be offered the minimum level of intervention necessary to meet their particular needs and should then be stepped up or down to treatments of different intensity as needed (Bower & Gilbody, 2005). Patients are able to access a range of NICE approved psychological interventions, particularly cognitive behavioural therapy (CBT), a talking therapy in which patients learn to challenge negative thoughts and beliefs. Among psychological interventions, the benefits of CBT are the most well-established (National Collaborating Centre for Mental Health, 2010). A review of the evidence of treatments for depression commissioned by NICE concluded that CBT is just as effective as drug treatment during the treatment phase, and more effective than drugs in preventing relapse (National Collaborating Centre for Mental Health, 2010). Furthermore, the authors state it is cost effective. Combination therapies of CBT and antidepressants were viewed to have an advantage over antidepressants alone (National Collaborating Centre for Mental Health, 2010). In addition to CBT, IAPT also offers access to other non-pharmacological interventions which have been proven in RCTs to be effective in depression and anxiety disorders, including guided self-help, group work, interpersonal therapy, structured physical activity and couples therapy (National Collaborating Centre for Mental Health, 2010). A number of evaluations of IAPT pilot sites have now been completed, demonstrating the effectiveness of the service model in practice. One observational prospective study of health outcomes at two IAPT pilot sites, albeit with different caseloads and emphases, concluded that IAPT was beneficial in most cases (Clark et al., 2009). The authors reported good recovery rates (55-56%), purportedly higher than those expected if patients had recovered naturally or received minimal intervention (5–20%). Furthermore, a one-off survey indicated that treatment gains were largely maintained at 4-12 month follow-ups.
Following the success of the pilot sites, since 2008 there has been a phased roll-out of IAPT for adults, with plans to extend services to children and young people, people with long-term physical conditions or medically unexplained symptoms and people with severe mental illnesses (Department of Health, 2011b). Nonetheless, critics of IAPT have highlighted inconsistencies in the intended patient group and have questioned the appropriateness of considering milder, ‘subthreshold disorders’ as treatable pathologies (Middleton et al., 2005).

A positive practice guide for using IAPT with offenders has also been published (Department of Health, 2009b), which acknowledges the specific issues, challenges and benefits associated with this population. A major issue is that whilst secondary mental health ‘in reach’ teams are now well-established in prisons, primary mental healthcare services remain underdeveloped in comparison (Bradley, 2009; Department of Health, 2009b; HM Inspectorate of Prisons, 2007). A 2005 survey found that almost half of prisons in England and Wales did not offer talking therapies for depression (Cornford et al., 2008). Whilst psychologists have worked in prisons for years, their input has been largely limited to offending behaviour programmes. Nonetheless, whilst the prospect of introducing IAPT to offender populations might seem challenging, it has the potential to reap a number of rewards, including reducing mental health-related offending behaviour, improving quality of life and reduced rates of self-harm and suicide, in addition to reducing symptoms of depression and anxiety (Department of Health, 2009b).

Both the Bradley Report and a thematic review of mental health undertaken by HM Inspectorate of Prisons identified the potential contribution of non-health activities towards improving the mental health of offenders (Bradley, 2009; HM Inspectorate of Prisons, 2007). Prisoners interviewed as part of the thematic review cited a number of non-health activities which were perceived to positively impact on their mental health including reading, painting and using the gym (HM Inspectorate of Prisons, 2007). Other activities that may have value include employment, social activities and peer support interventions. Notably, an evaluation of peer support mechanisms in prisons has recently been commissioned (Leeds Metropolitan University, 2012). Furthermore, offenders with mental illness frequently misuse drugs and/or alcohol, and thus may also benefit from psychosocial input from substance misuse services. In prisons, substance misuse needs are dealt with predominantly via Integrated Drug Treatment Services, which include CARAT (Counselling, Assessment, Referral, Advice and Throughcare) services. Whilst there is some provision for
psychosocial support under such arrangements, drug misuse services have not always been well integrated with mental healthcare in prisons (Bradley, 2009; Department of Health, 2009a).

2.3.7 Section summary

- Psychotropic medicines, such as hypnotics, anxiolytics, antipsychotics, antidepressants and CNS stimulants are widely used to treat mental illness.
- Critics of psychotropic medicines have drawn attention to the harms caused by these medicines and have voiced concerns that there is an over-reliance on medicines.
- There are a variety of psychological ‘talking therapies’ which can be used alongside, or as alternatives to, psychotropic medicines in order to treat mental illness.

2.4 The use of psychotropic medicines in prison

In the community, as described above, psychotropic medicines are widely used to treat mental illness. However, relatively little is known about how they are used in prisons. This section provides some historical context of psychotropic medicines use in prisons and then considers current debates in medicines management for mentally ill prisoners. This is followed by a review of the limited national and international research literature on psychotropic prescribing in prisons.

2.4.1 Historical context

“Prison doctors have become so sensitive to media criticism that they are just as likely to withhold doses of psychotropic drugs. It is true, though, that doctors may administer, or countenance the administration of, psychotropic drugs to achieve what the disciplinary staff want – a quiet prison.” (Benjamin Lee, Medical Adviser to the Prison Inspectorate, 1983, cited in Sim, 1990 p.113)

Although psychopharmacology is central to contemporary mental healthcare, the use of psychotropic drugs in prison has, historically, been controversial. In order to understand the contemporary use of psychotropic medicines in prisons, therefore, it is useful to understand a little about how they were used in the past.
The 1950s can be regarded as the ‘age of psychopharmacology’ (Fennell, 1996). For the first time the phenothiazines, a new and powerful class of psychotropic drugs, became widely available for the treatment of mental illness. Although medicines had been used before (such as bromides and chloral hydrate), these were different. The newer antipsychotic drugs calmed patients, without sedating them, and caused a sense of indifference to symptoms, which reduced anxiety, tension and distress. Thus, patients became more manageable and needed little special nursing attention. By 1970, sales of chlorpromazine (under the trade name Largactil) in the USA had reached $347 million (Owen & Sim, 1984). Drugs rapidly began to replace psychosurgery, insulin shock therapy and electroconvulsive therapy as the favoured treatment.

In prisons in England and Wales, as in psychiatric hospitals, psychotropic drugs became an important new tool in doctors’ ‘medical armoury’ (Sim, 1990). The ability of drugs to manage difficult behaviour and create ‘a quiet prison’ was not lost on prison doctors or discipline staff. At first, doctors were open about using drugs to help make prisoners more manageable and amenable to the regime. Later in the 1970s, however, use of psychotropic drugs became more controversial. In 1978 a prison doctor wrote a controversial paper in the Prison Medical Journal concerning the use of the drug Depixol to treat psychopaths, who whilst showing “no evidence of formal illness”, exhibited situational stress and “presented discipline staff with control problems for which there has been no satisfactory solution” (cited in Sim, 1990 p.118-119). Furthermore, reports began to surface from prisoners and ex-prisoners who claimed to have been drugged against their will, or had apparently accepted treatment only due to coercion and threats (Sim, 1990). Increasingly, critics of prison healthcare and patient pressure groups, such as Radical Alternatives to Prison (RAP) and the National Prisoners Movement questioned whether drugs were prescribed in prisons for disciplinary purposes, to control difficult individuals rather than to treat mental illness (Sim, 1990). As the distinction between treatment and control became increasingly blurred, these debates also raised a more general question about the involvement of prison doctors in disciplinary activities.

The high level of secrecy surrounding the use of medicines in prisons further exacerbated the situation and intensified media and political attention on prison doctors. In 1980, the Prison Service relented and began to include limited data concerning use of psychotropic medicines in prisons as part of its annual report (Home Office, 1980, 1982). At the time, this
move was described by Gunn as a “new and, sadly, slightly defensive” response to the “bash-the-prison-doctor brigade who seem to believe that medical staff have agreed to drug all trouble-makers into submission” (Gunn, 1981 p.31). Unfortunately, the style of analysis and presentation of figures made it difficult to derive meaning from the data (Gunn, 1981). The lack of clarity regarding how drugs were categorised, absence of data on dose (i.e. medication strength) and aggregation of data across multiple prisons were some of the problems noted; some went as far as to say the figures were purposely designed to be “as misleading as possible” (Owen & Sim, 1984 p.250). Notwithstanding its limitations, the data highlighted the wide variation in dosage rates between prisons. There also appeared to be a higher rate of prescribing in women’s prisons.

2.4.2 Medicines management and pharmacy services in prisons

Medicines management has been broadly defined as “a system of processes and behaviours that determines how medicines are used by the NHS and patients” (National Prescribing Centre, 2002). Whilst medicines can be useful, they also have the potential to cause harm if not used appropriately. Effective medicines management should ensure that medicines are used in a way that is safe, cost-effective and minimises risk of harm to patients.

Medicines management is a fundamental and essential part of NHS systems of clinical governance, which applies equally to healthcare services operating in prisons as it does to the wider NHS. Pharmacists have a central role in supporting the effective management of medicines within the prisons. However, there is considerable variation in the types and quality of pharmacy services available across the prison estate in England and Wales. A national survey of prisons, which achieved a 90% response rate, asked establishments to provide details regarding their pharmacy set-up. Overall, roughly a third (36%) of prisons reported that they received pharmacy services from an independent provider, a third (30%) had an onsite pharmacy and the remainder of prisons received services delivered by other prisons or local NHS trusts (Shaw et al., 2009b).

In addition to the variation in service models, prisons face a number of specific challenges in relation to medicines management. Historically, there has been a ‘supply only’ culture in prison pharmacy services, making use of a very narrow range of pharmacists’ skills. In 2003, A Pharmacy Service for Prisoners was published, which set out a plan for delivering more
patient-focused, primary care orientated pharmacy services, centred on identified needs (Department of Health, 2003b). The report placed considerable emphasis on promoting self-care and personal responsibility for medicines among patients. Thus, the report signalled a clear change in ethos to a community, rather than hospital, style of practice.

For a number of reasons, developing a more empowering ethos of self-care represents an ambitious challenge in prisons. Risk management is of particular importance in secure environments. Only a limited range of herbal remedies and over-the-counter medicines are usually available from the prison shop (canteen), meaning all other medicines, even for relatively minor ailments, have to be prescribed by the doctor. A major concern is that some prescribed medicines, particularly those with psychotropic, sedating or euphoric properties, can be misused and therefore carry value in prison (Royal College of General Practitioners, 2011). This presents a number of safety and security risks, both to individuals consuming illicitly obtained medicines and to vulnerable individuals with genuine mental health needs, who may come under pressure to share prescribed medication with others. Given the high rates of suicide in prisons (Fazel et al., 2005b; Shaw et al., 2011), there are also concerns about the safety in overdose of certain medicines. Staff working in prisons have a duty of care to prisoners. Although this is true of patients in the wider community, it is arguable that the consequences of a death in prison may be more likely to be seen as a failure of the system than an unpreventable tragedy (Birmingham et al., 2006). For such reasons, prisoners have, historically, been given very limited opportunities to self-care, especially with regard to medicines.

Recent guidance from the Royal College of General Practitioners (RCGP) Secure Environments Group has reiterated that prescribers in prisons need to balance security and safety risks against individual health needs (RCGP, 2011). For example, access to certain medicines that are commonly prescribed in the wider community (e.g. temazepam), can be considered less suitable for use in prisons (RCGP, 2011). Although certain aspects of medicines management arrangements used in the wider community may need to be adapted in prisons in order to mitigate risk, prisons have previously been criticised for being preoccupied with security. Recent debates in relation to in-possession medication procedures in prisons provide a pertinent example of this. A paper by Hassan et al. (2012), which describes some of the issues has been included in the appendices (Appendix A). Historically, to minimise the risk of medicines being diverted or hoarded, medicines were
commonly issued for consumption in single doses, under supervised conditions (colloquially known as ‘see to take’ medicines). Since the publication of *A Pharmacy Service for Prisoners* (Department of Health, 2003b), prisons have been encouraged to work towards a position where prisoners are more routinely allowed to keep and administer their medicines themselves, known as ‘in-possession’ medicines. There is no evidence that a policy of increasing in-possession medicines is linked to a rise in overdoses, self-harm or abuse; indeed, proportionally few incidents of self-harm have been attributed to poisoning with prescribed medication (Adeniji, 2003; Shaw *et al.*, 2011). Research has suggested that, whilst in-possession policies and practices have become more widespread, staff remain cautious about the risks (Department of Health, 2003b; Hassan *et al.*, 2012). Thus, there is arguably some distance yet to travel before in-possession medication policies (and the wider notion of self-care) can be fully embraced in prisons.

### 2.4.3 Addressing the medication needs of newly received prisoners with mental illness

Reception health screening is widely regarded as a key stage in identifying physical and mental health needs, and determining the care that a prisoner will subsequently receive (Birmingham, 2001; Birmingham *et al.*, 2000; HM Prison Service, 2010). Part of the purpose of reception screening is to identify mental health needs and any pre-existing care that may need to be continued in prison, including prescribed medication. One nationwide survey of unsentenced prisoners in England and Wales (n=711) found that 34% of men and 53% of women reported being on some form of prescribed medication prior to custody (HM Inspectorate of Prisons, 2000). The most common types of medication were benzodiazepines and antidepressants; collectively, these accounted for half of all medications reported.

When patients are transferred between healthcare settings, reliable and accurate information about their medication needs should be transferred at the same time. In the wider healthcare literature, this process is referred to as ‘medicines reconciliation’ (NICE, 2007; National Prescribing Centre, 2008). Although medicines reconciliation is most often discussed in relation to hospitals, the concept is clearly of relevance to any organisation that admits patients, including prisons. The National Prescribing Centre has summarised the purpose of medicines reconciliation as follows (National Prescribing Centre, 2008 p.5):

- “To make sure the right patient gets the right drug, in the right dose and at the right time (i.e. continuity of treatment);
• To reduce the risk of medication errors occurring when the care of a patient is passed from one care setting to another;

• To provide ongoing personalised medicines management care for each patient;

• To reduce confusion about patients medication regimens (for both healthcare professionals as well as for patients); and

• To improve service efficiency and make the best use of staff skills and time.”

Prison mental health policy clearly states that medication for mental disorder should not be automatically withdrawn on entry into prison without proper clinical assessment (Department of Health & HMPS, 2001). Yet, a number of studies have reported that prisoners experience problems with continuing established medication regimes on entry into prisons (Bowen et al., 2009; Douglas et al., 2009; Plugge et al., 2008; Prison Reform Trust, 2008; Shaw et al., 2006).

As part of a thematic review undertaken by HM Inspectorate of Prisons (HM Inspectorate of Prisons, 2000), unsentenced prisoners were asked whether their pre-custody medications had been continued in prison. In 40% of cases, prisoners reported that medications were discontinued in custody. Illegal drug users were more likely than non-drug users to report having had their medication discontinued (71% vs. 41%). Whilst benzodiazepines and methadone were the types of medication most likely to be discontinued in custody, it was notable that a significant proportion of antidepressants (37%) and antipsychotics (20%) were also withdrawn. Furthermore, the wide variation in discontinuation rates observed between different establishments highlighted inconsistencies in practices across the prison estate.

Shaw et al. (2006) have reported specifically on the continuity of prescribing for mentally ill prisoners. In a prospective study, the researchers tracked the care of a sample of over 2000 prisoners across five UK prisons from reception into custody until discharge. In addition to interviewing prisoners, clinical records were reviewed to confirm which medicines had been prescribed in prison. The authors found that amongst those prisoners received into custody who reported being in receipt of prescribed psychotropic medication in the community, 64% did not receive that medication during their first month in custody. Furthermore, in interviews with mentally ill prisoners undertaken as part of the same study, dissatisfaction with the management of psychotropic medicines in prison emerged as a key theme (Bowen
et al., 2009). Prisoners reported that discontinuation of pre-prison medication following entry into custody was both common and distressing, exacerbating anxieties at an already stressful time. Even if prescriptions were continued, the inflexibility of prison procedures often delayed access to medication and caused disruption to normative medication routines.

Douglas, Plugge and Fitzpatrick (Douglas et al., 2009; Plugge et al., 2008) ran focus groups and interviews in two women’s prisons in southern England with a range of women of different ages and ethnic backgrounds. Questions focused on exploring the impact of imprisonment on health and attitudes towards prison primary care services. They found that women complained of poor access to medication in prisons, hampering their ability to self-care. Several women reported that medications they had previously been prescribed in the community were withheld on entering prison. Yet, no clear reasons were given for their discontinuation, adding to their sense of frustration.

The findings of these studies appear to suggest shortcomings in continuity (and indeed, equivalence) of care on entry into custody. Nonetheless, a number of these studies relied on self-report and did not check medical records to confirm reports (Douglas et al., 2009; HM Inspectorate of Prisons, 2000; Plugge et al., 2008; Prison Reform Trust, 2008). Furthermore, as Shaw et al. (2006) have acknowledged, it is not clear from any of these studies whether pre-custody medication was discontinued through a process of omission or as a result of active decision making. Despite these limitations, the findings of such studies do suggest that there may be substantial problems in delivering continuity of care at the interface between community and prison.

Why were so many prescriptions discontinued? It could be that prescription claims are being missed, overlooked or not prioritised. A recent survey of local prisons found that whilst 78% stated that they aimed to verify the prescriptions of newly received prisoners within three days of reception into custody, less than half of establishments had included this in a written policy (Shaw et al., 2009b). Furthermore, reports from healthcare staff interviewed as part of the same project suggest staff face a range of problems which hinder medicines reconciliation work. These include the late timing of new arrivals into custody (who may be in a distressed or inebriated state), difficulty in identifying and contacting community prescribers (especially out of hours) and reluctance among community
prescribers to share information. A prison mental health worker, quoted in Bowen et al. (2009), described the difficulties:

“The only way really around it is that you need to revamp the system of people being reviewed [on arrival in prison]. If you can imagine, the courts sit `til 5 o'clock. If someone is remanded, they mightn't get to the prison `til 8 o'clock, 9 o'clock that night. They're [the nursing staff on duty] not going to start ringing GPs at that time of night. In which case, they're then referred to healthcare. If they're lucky, they'll see them the next day. If there's a huge number of people to be seen, they might not be seen for 2 or 3 days. These are where the delays occur.”

An alternative possibility is that pre-custody medications are being deemed unnecessary in custody. Indeed, there may be good reasons why psychotropic medicines are reduced, substituted or withdrawn in prison. For example, whilst benzodiazepines are only indicated for short periods, it is common for offenders to report having used benzodiazepines (whether illicit or prescribed) for long periods in the community prior to imprisonment (HM Inspectorate of Prisons, 2000). Under such circumstances, gradual detoxification may be difficult, but appropriate (RCGP, 2011). This specific scenario is recognised in Changing the Outlook (Department of Health & HMPS, 2001); notably, however, this only justifies a reduction regime, rather than immediate discontinuation.

A further factor to be considered is distrust. Staff commonly believe that a minority of prisoners may present with exaggerated or fictitious symptoms to attempt to acquire medication to misuse or sell (Hassan et al., 2012; RCGP, 2011). At minimum, anyone taking medicines for mental health problems is meant to be referred to prison mental health services for further psychiatric assessment (see Box 1, page 30). However, staff may be reluctant even to spend time following-up medication claims if they suspect they will turn out to be false (Bowen et al., 2009). In this respect, the disingenuous intentions of a minority of prisoners may complicate the process of continuing prescriptions for those genuinely in need of psychiatric medication. To quote an ex-prisoner, ‘not all prisoners are addicts or skivers, yet we are treated as if we are’ (Mellor, 2003 p.59). Nonetheless, staff should remember that in certain cases, not prescribing can also be harmful to patients. In cautioning staff against being overly suspicious, HM Inspectorate of Prisons has described the following case of a prisoner suspected of complaining of physical symptoms to elicit drugs to misuse (HM Inspectorate of Prisons, 2000 p.82):

“An example of this was a young woman on remand with a history of substance misuse who went into sickle cell crisis and was refused medication for pain relief on the grounds that she just wanted drugs. Adequate pain relief is difficult to provide for dependent drug users who have a high tolerance level, and in these circumstances
more, not less, care needs to be taken to identify the appropriate dose of the right drug.”

2.4.4 Prevalence of psychotropic prescribing

2.4.4.1 Evidence from studies in England and Wales

In England and Wales, only one research study (albeit now over 10 years old) has provided detailed, high-quality data on rates of psychotropic prescribing in prison: the 1997 ONS survey of psychiatric morbidity (Singleton et al., 1998). Table 3 (page 57) provides a summary of the psychotropic prescribing rates reported by the ONS study for men and women in prisons and Youth Offender Institutions (YOIs). The ONS study (see section 2.2.1.1 for further details) showed that a fifth of men in prison were prescribed some form of medication acting on the Central Nervous System (CNS), which included psychotropic medicines and also analgesics, antiepileptics and drugs for substance dependence.
**Table 3:** Psychotropic and CNS drug prescribing rates reported in ONS surveys of psychiatric morbidity, by population

<table>
<thead>
<tr>
<th>Study</th>
<th>Study population</th>
<th>Subgroup</th>
<th>Hypnotics &amp; anxiolytics</th>
<th>Anti-psychotics</th>
<th>Anti-depressants</th>
<th>Any CNS drug&lt;sup&gt;a&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Singleton et al. (1998)</td>
<td>Prisoners</td>
<td>Sentenced men</td>
<td>3%</td>
<td>2%</td>
<td>6%</td>
<td>18%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Remand men</td>
<td>7%</td>
<td>4%</td>
<td>8%</td>
<td>23%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sentenced women</td>
<td>12%</td>
<td>8%</td>
<td>21%</td>
<td>48%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Remand women</td>
<td>29%</td>
<td>14%</td>
<td>23%</td>
<td>56%</td>
</tr>
<tr>
<td>Lader et al. (2000)</td>
<td>Young offenders</td>
<td>Sentenced men</td>
<td>2%</td>
<td>2%</td>
<td>3%</td>
<td>10%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Remand men</td>
<td>2%</td>
<td>2%</td>
<td>3%</td>
<td>10%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Women</td>
<td>14%</td>
<td>8%</td>
<td>12%</td>
<td>40%</td>
</tr>
</tbody>
</table>

<sup>a</sup> Includes all prisoners prescribed any CNS medication listed in BNF chapter 4, including analgesics, antiepileptics and medicines for substance dependence.
Among male prisoners, the most commonly prescribed medicines were antidepressants, followed by hypnotics and anxiolytics, and antipsychotics. Rates of prescribing were higher in remand prisoners than sentenced prisoners. Prescribing among women in prison followed a similar pattern, though rates were higher: compared with men, women were twice as likely to be prescribed CNS medicines. Overall half of women were prescribed CNS drugs, one in five women received antidepressants and one in 10 received antipsychotics. In YOIs, 10% of males were prescribed CNS drugs. Unlike adult men, among young men rates of prescribing were the same among remand and sentenced individuals. In line with adult prisoners, rates of prescribing were much higher among young women than men: overall, 40% of females were prescribed CNS drugs, with hypnotics and anxiolytics being the most commonly prescribed type of drug (14%).

Aside from the ONS study, no further research has been published which has reported on psychotropic prescribing patterns in prisons in England and Wales. However, a few relevant studies exist in the grey literature; whilst not formally research, two of these have described aspects of psychotropic prescribing and thus, especially given the paucity of data on this topic, have been deemed worthy of inclusion within this review.

In 2003, following a high profile suicide attempt involving medicines, Howells et al. (2003) undertook an audit of psychotropic prescribing in prisons to determine the extent to which best practice was being followed. The precise methodology used is not clear; however, it appears that 23 prisons in England and Wales supplied data on antidepressant and antipsychotic use. The findings indicated that overall, 39% of antidepressants and 46% of antipsychotics prescribed were of the older (TCA or typical) variety. Although no statistical analyses were performed, the authors noted substantial heterogeneity of prescribing between different prisons. The authors concluded that “a significant number of establishments use considerable quantities of older antidepressants when there are safer alternatives for the prison environment.”

As part of the Department of Health’s report A Pharmacy Service for Prisoners (Department of Health, 2003b), Wiffen presented a limited amount of prescribing data from five English prisons comprising low secure, high secure, YOI, local and training establishments. This focused primarily on volumes and costs, highlighting the top drugs used within each establishment. Although no formal statistical analyses were performed, the data showed considerable variation in costs and prescribing patterns across establishments, presumably reflecting differing population health needs. The average prescription costs per prisoner
were highest at the adult local prison and the high security prison (£273 and £167 per annum per prisoner respectively); both of these establishments exceeded the average annual prescription cost per head in the English general population as a whole (£110). There also appeared to be higher use of antidepressants, antipsychotics certain hypnotics (zopiclone) in remand and high secure prisons.

Clearly, there is a paucity of data on the prevalence of psychotropic prescribing in prisons in England and Wales. Whilst the ONS study provided some useful data, a number of limitations are noteworthy. Firstly, the data were collected 15 years ago. Due to a variety of factors, it is likely that psychotropic prescribing will have changed during this time, for example due to developments in prescribing policy and research, the introduction of new drugs and others coming off patent.

Secondly, the ONS surveys were focused on determining the prevalence of psychiatric morbidity, rather than medicines use. Inevitably, this gives rise to a number of methodological limitations. There is a limited level of detail provided on medicines use, including a lack of data on drug types (e.g. SSRIs versus older antidepressants), individual drugs (e.g. fluoxetine) and doses prescribed. Certain aspects of the study design and analysis could also be seen to create difficulty in interpreting data. For instance, psychotropic drugs used to treat mental illness are often pooled together with other CNS drugs, which have quite different clinical indications (e.g. drugs for substance dependence, epilepsy and analgesics). Furthermore, use of antipsychotic medication was used as an indicator of probable psychosis; as the authors acknowledge, this means that associations between diagnosis and medication use are inevitable. Whilst there is some consideration of prescribing patterns within particular diagnostic groups, this is complicated due to comorbidity. For example, if an individual has more than one diagnosis, it might be unclear which condition is being treated by a particular medication. Such factors prevent us from drawing any firm conclusions regarding the appropriateness of prescribing patterns in this group.

Thirdly, one of the purported strengths of the ONS prison study was that, as one of a series of national psychiatric morbidity surveys with similar methods and measures, comparisons could be drawn between different groups, for example with the general population (Coid et al., 2002). However, comparing crude rates does not take into account the substantial differences in age and gender between prison and community populations (prisoners are on average younger and more likely to be male). Some standardised comparisons have been
made, for example Brugha et al. (2005) compared rates of psychosis between prisons and communities, however unfortunately not for psychotropic prescribing. Furthermore, the presentation of data on reports makes some comparisons difficult: for example, while estimates of psychotropic medicines use are reported for the general population of prisoners (stratified by gender and legal status), overall population estimates are not reported elsewhere. Thus, we cannot easily compare the relative rates of psychotropic prescribing in prisons and communities to see if they mirror the relative rates of psychiatric morbidity in these populations.

Why are there so few studies on psychotropic prescribing in English and Welsh prisons? One potential explanation is that perhaps psychotropic prescribing is not considered to be of interest or importance. However, given the proliferation of prescribing data and studies describing (upward) prevalence and trends in psychotropic medicine use in the general population (Cameron et al., 2009; Mojtabai & Olfson, 2010; Moore et al., 2009; Nutt, 2011), not to mention the not inconsiderable media coverage increasing psychotropic prescriptions have attracted, this explanation arguably lacks credibility. Furthermore, concerns about the pattern and consistency of prescribing in prisons have been raised repeatedly (HM Inspectorate of Prisons, 2000, 2007; Prison Reform Trust, 2008; RCGP, 2011). Indeed, after reporting on the seemingly high rate of psychotropic prescribing among women in prisons, HM Chief Inspector of Prisons has specifically recommended that psychotropic prescribing patterns be examined in order to clarify the situation (HM Inspectorate of Prisons, 2007).

Perhaps a more likely barrier concerns data availability and the practical issues involved in collecting data. In the past psychotropic prescribing in prisons was a highly controversial topic and the Prison Service was criticised for the level of secrecy over such data (Sim, 1990; Sim, 1994). Although the Home Office eventually began to release limited data concerning use of psychotropic medicines in prisons (Home Office, 1980, 1982), the style of analysis and presentation rendered these data largely meaningless for the purposes of determining the proportion of prisoners that received psychotropic medication (Gunn, 1981). Today, unlike primary care settings in the community, there are no routine data available on prescribing for prisons in England and Wales. Furthermore, there is no centralised database of prescribing data, pharmacy records or patient clinical records; until very recently, patient

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5 Instead, rates of prescribing are given within diagnostic groups e.g. depression.
6 Prescribers and pharmacists in the community can access routinely collected data on prescribing via ePACT (Electronic Prescribing Analysis and Cost), a free service which allows real-time analysis of prescribing data.
clinical records were often held in paper format. Thus, any data about prescribing, diagnoses or service utilisation need to be collected from prisons individually. This combination of factors has meant that data collection processes are unavoidably laborious and time consuming. Inadequate access to prescribing and expenditure data was highlighted as a particular problem in *A Pharmacy Service for Prisoners* (Department of Health, 2003b p.67):

“Effective medicines management relies on reliable data. The service needs a firm plan to move from current poor situation in terms of prescribing data to a system where drug use can be analysed at local area and national level... it is recommended that systems are put in place to ensure such data is available for every prison establishment to improve health care, inform clinical governance and demonstrate value for money”.

### 2.4.4.2 Evidence from international studies

Aside from the UK-based literature, a number of studies have been published describing psychotropic prescribing in prison populations internationally, particularly in Europe and the USA.

Kjelsberg and Hartvig (2005b) completed a survey of prescribing which covered 90% of the Norwegian prison population. They reported that 34% of men and 44% of women in prison were in receipt of medication acting on the CNS. No significant gender differences were found with regard to antidepressant, antipsychotic, hypnotic or anxiolytic prescribing. The authors also used drug expenditure data to compare patterns of prescribing over time in Norwegian prisons (1978 vs. 2004) and with several other populations, including the general population, a psychiatric hospital and the Swedish prison population. They concluded that the rate of prescribed psychotropic drug use was higher than in the general population but lower than that observed in psychiatric hospital units.

A Swiss study by Elger *et al.* (2002) compared prescribing outcomes among a sample of prisoners (n=179) attending outpatient appointments over a 3 week period in 1997. The study showed that psychotropic drugs (mostly anxiolytics and hypnotics) accounted for about half of drugs prescribed at these appointments in prison. Women prisoners were significantly more likely to be prescribed psychotropic drugs than men (77% versus 56%), although it should be noted that the female sample was very small (n=22). Notably, the study also recruited a group of community-based patients (n=701), who attended outpatient appointments in an urban clinic over the same period, for comparison purposes.
In an effort to control for age-related differences between the populations, comparisons were limited to male patients in prison and the community aged less than 39 years of age. An analysis of this subgroup showed that psychotropic medication was prescribed five times more often at appointments in prison than in the community.

As part of a paper on pharmacy practice in prisons, Harcouet (2010) presented some simple descriptive data on prescribing patterns in a large Parisian prison. Whilst the procedures for selecting the sample (n=1337), collecting data and analyses are not entirely clear\(^7\), the authors appear to have used pharmacy records to infer that half (53%) of all prisoners were prescribed psychotropic medications on a long-term basis. More specifically, 40% of prisoners received anxiolytics and/or hypnotics, 11% received antidepressants and 12% received antipsychotics.

Several studies have been completed in the USA which have reported on the prevalence of psychotropic prescribing in prisons. In response to concerns about rising pharmacy costs, Lund et al. (2002) undertook a longitudinal analysis of prescribing trends in the Iowa Department of Corrections prison system. The study utilised a combination of prison population data and drug expenditure records over the years 1990-2000 to determine trends in annual expenditure per inmate. Overall, annual expenditure on psychotropic drugs increased dramatically from $291 per 100 inmates in 1990 to $8,138 in 2000, a 28-fold difference. Both the volume and costs of antidepressants, mood stabilisers, hypnotics and anxiolytics all increased. However, whilst the overall volume of antipsychotic prescriptions showed a slight decrease, expenses increased nine-fold. The authors concluded that a shift towards newer (and safer) drugs was largely responsible for the increase in costs, placing additional strain on already scarce resources.

Baillargeon and colleagues conducted a series of studies in Texas Department of Criminal Justice (TDCJ) prisons focused on prescribing patterns (Baillargeon et al., 2001; Baillargeon et al., 2000; Baillargeon & Contreras, 2001; Williams et al., 2010). Unlike most of the studies discussed previously, which have measured the prevalence of psychotropic prescribing among the general population of prisoners, these studies focused on prescribing patterns within two particular diagnostic categories, namely prisoners with depressive disorders and prisoners with psychosis. Retrospective data on prescribing patterns were collected from the clinical records of a large sample of TDCJ inmates with depressive disorders (n=5,305) in

\(^7\) However, this article was originally written in French, therefore this could reflect errors in translation.
1998-1999 (Baillargeon et al., 2001; Baillargeon et al., 2000). Data were also collected on 3,750 TDCJ prison inmates who were a) diagnosed with schizophrenia and/or other psychotic disorders and b) receiving antipsychotic medication (Baillargeon & Contreras, 2001). In TDCJ prisons, medication prescription and compliance data are maintained within computerised medical records systems on all inmates receiving prescribed medication. Individual-level data on prescriptions, clinical characteristics and socio-demographic data were obtained for all participants.

An analysis of antidepressant prescribing patterns showed that, overall 47% of inmates with depressive disorders were prescribed SSRIs, 31% received tricyclics and 22% received no antidepressant medication. The researchers found that:

- Men and older (age >50) prisoners were less likely to be prescribed antidepressants than their female and younger counterparts;
- Women, young people (age <30) and white inmates were more likely to be prescribed SSRIs; and
- Male gender, older age and being prescribed tricyclic antidepressants were all positively associated with ‘compliance’ scores (i.e. the number of doses taken divided by the number of doses prescribed during the study period).

Furthermore, among prisoners with schizophrenia treated with antipsychotics:

- 85% received typical antipsychotics; this rose to 89% for other forms of psychosis; and
- Women, Black men and nonviolent prisoners were less likely to be prescribed atypical drugs than their counterparts.

The authors concluded that these findings are reflective of both the increased costs of atypical antipsychotics and newer SSRI drugs costs and also TDJC prescribing policies; at the time local formularies stipulated that typical antipsychotics should be attempted first-line. The authors also noted that SSRI use appeared to be lower among prison inmates than among community and inpatient USA populations (no equivalent community data were available for antipsychotics).

Overall, the evidence from international studies of prescribing in prisons is useful, yet far from comprehensive. Studies appear to indicate elevated use of psychotropic medication amongst prisoners in comparison to the communities from which they are drawn; a finding which could reflect the increased rates of psychiatric morbidity generally observed in such populations, in the UK and internationally (Brooke et al., 1996; Fazel & Danesh, 2002; Gunn
et al., 1991a; Gunn et al., 1991b; Maden et al., 1996; Maden et al., 1994; Steadman et al., 2009). In some studies there were also noticeable gender differences in psychotropic use (Baillargeon et al., 2001; Baillargeon et al., 2000; Elger et al., 2002; Singleton et al., 1998). In such instances, women were generally more likely than men to be prescribed psychotropic drugs, which is consistent with the increased psychiatric morbidity in this group.

Some researchers (particularly the USA-based studies) were able to exploit computerised patient records databases and thus benefited from very large, representative samples. This is undoubtedly advantageous as larger samples generate precise prevalence estimates and adequately powered statistical comparisons (particularly within subgroup analyses).

However, there were limitations. Just two studies provided comparison data from the community or other settings (Elger et al., 2002; Kjelsberg & Hartvig, 2005b). Community data are arguably useful as they allow us to consider the extent to which there is equity and continuity of prescribing between settings. Unfortunately, neither of the studies which made such comparisons adequately accounted for age and gender differences between populations8. Taking such factors into account is important as prison populations are, on average, significantly younger and have a greater proportion of males than the general population; both of these factors have been independently associated with mental illness (Moore et al., 2009).

A second limitation concerns the use of drug volume and expenditure data in some studies (Kjelsberg & Hartvig, 2005b; Lund et al., 2002). Whilst making use of readily available data is a simple and efficient strategy, prescriptions cannot be matched to individuals; therefore this method relies on using mean dosages to calculate use/costs per head9. Use of individual-level data, as in the TDCJ studies (Baillargeon et al., 2001; Baillargeon et al., 2000; Baillargeon & Contreras, 2001), whilst more time laborious, is far superior as it has the potential to better account for the full range of pharmacological, clinical and demographic factors (such as dosage, quantity and diagnosis).

A third issue concerns choice of study design. Most commonly, studies defined samples on the basis of the drugs of interest, psychiatric diagnosis, or (more rarely) both. Each approach

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8 One study (Elger et al, 2002) did make an attempt to control for age differences between prison and community groups; this should be commended, however the measures taken were simplistic and exclude important groups from the analysis, including women and older prisoners.

9 To illustrate the point, depending on the dose prescribed to an individual, 28x 10mg tablets could constitute a week’s supply to one person (40mg per day), but 4 weeks to another (10mg per day). Therefore using average doses lacks precision as it could over/underestimate prevalence of prescribing.
has its own particular strengths and limitations to be considered. Selecting participants on the basis of diagnosis (e.g. all patients with a diagnosis of depression), enables us to compare which groups are more or less likely to receive treatment and, if so, which type. Alternatively, selecting participants on the basis of drug allows us to determine the range of conditions for which particular psychotropic drugs are prescribed (including in cases where there is no recorded diagnosis). Therefore different approaches might be more or less suitable depending on the data available, the organisation of clinical records systems and the research question being asked.

2.4.5 Summary

- Psychotropic prescribing in prisons was, and arguably remains, controversial. In the past, critics questioned whether drugs were used for therapeutic or disciplinary purposes.
- Risk management is a particular concern in prisons and doctors have to balance security and safety risks when prescribing psychotropic medicines.
- Whilst prison mental health policy clearly states that medication for mental disorder should not be automatically withdrawn on entry into prison, prisoners have reported problems with continuing established medication regimes on entry into prisons.
- There are no recent national data on psychotropic prescribing; however, international evidence indicates higher rates of psychotropic prescribing in prisons.
- Previous studies on psychotropic prescribing have been limited by a lack of robust community comparison data and have rarely commented on the individual drugs used in prisons.
2.5 Conclusions

Mental illness is significantly more common among prisoners than the general population. UK policy entitles prisoners to the same standard of healthcare as that available in the community, including access to appropriate medications for mental illness. Ideally, imprisonment should offer an opportunity to engage a hard to reach population with NHS services, improving continuity and efficiency of care. Psychotropic medicines are widely used in the community to treat mental illness. However, the equity, consistency and safety of prescribing for mental illness in prisons have been questioned.

Robust research on prescribing in prisons is scarce. However, the limited evidence available suggests that prescribing practices in prisons are different to those in the community, both in terms of the way medicines are managed and with respect to the particular types, doses and formulations of medications that are prescribed. Healthcare professionals have argued that some aspects of prison-based healthcare have to be altered from those commonly practised in the wider community, in order to mitigate against risk and to safely discharge the prison’s duty of care to prisoners. However, patients have complained about discontinuity of prescribing between the community and prison and have reported that prescriptions are frequently contested, changed or withdrawn. They have also expressed dissatisfaction with the arrangements for accessing psychotropic medicines once in custody.

Access to psychotropic medication in prison is a particularly controversial and challenging area, with tensions between policy and practice. Healthcare staff working with mentally ill prisoners, whilst remaining mindful of the particular risks within a secure setting, have to work within the policy context of equivalence of care. Medicines research in prisons in England and Wales has been limited by the lack of centralised, comprehensive prison pharmacy data and the most robust research study in this area is now out of date. Thus, there is a significant knowledge gap. Nonetheless, robust data on prescribing in prisons are essential to determine whether prisoners receive equitable access to medications and to ensure that medicines are used in a way that is safe, cost-effective and minimises risk of harm to patients.
2.6 Study aims and objectives

This study will determine patterns of psychotropic prescribing in prisons and consider the extent to which people with mental illness have ‘equivalent’ access to psychotropic medicines in prison.

I will address this aim by answering the following four research questions:

1. What proportion of psychotropic medicines reported at prison reception are discontinued on entry to custody and what factors are associated with discontinuation?
2. What is the prevalence of psychotropic prescribing in prisons and how does this compare with the general population?
3. What do prisoners and healthcare staff perceive to be the purpose of psychotropic prescribing in prisons?
4. How do prisoners and healthcare staff account for apparent differences in access to psychotropic medicines between prisons and communities?
3. Methods: Part 1

This chapter is the first of two methods chapters that describe the approaches and procedures used to collect and analyse data. In this chapter, an overview of the three studies that form this thesis is provided. This is followed by details of the methods for the quantitative arm of the work, namely studies one and two.

3.1 Overview

3.1.1 Research paradigm

Research can be approached from a number of perspectives or paradigms. A paradigm has been defined as an “entire constellation of beliefs, values techniques, and so on, shared by the members of a given community” (Kuhn, 1962 p.162). Paradigms cannot be proven or disproven (Guba & Lincoln, 1989). Nonetheless, they carry implications for how research is carried out and how knowledge is accumulated.

Historically, the paradigm known as positivism has dominated scientific research. Positivism assumes an ontological position known as realism: the view that there is one single, external reality that exists independently of human consciousness (Crotty, 1998). Dissatisfaction with positivism in the realm of social sciences led to the emergence of an alternative paradigm, known as social constructionism, which adopts a critical stance on taken-for-granted ways of understanding the world (Burr, 2003). This proposes that as individuals engage with the world and others, they develop varied and subjective meanings of their experiences. From this perspective, there are multiple constructions of the world (or ‘realities’). However, there is no single, objective reality (Mays & Pope, 1995a). This position is known as relativism.

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The particular terms (and meanings) used vary between disciplines, but also include interpretivism and social constructivism. As my background is in psychology, I prefer to align myself with the term social constructionism and use this term within this thesis.
The two ontological positions of realism and relativism have very different implications for epistemology; the way in which knowledge is derived. From the perspective of positivism, knowledge is derived from scientific method; here there is an emphasis on hypothesis testing and concepts such as rigour, reliability, validity, and the removal of subjectivity and bias (Guba & Lincoln, 1989). Positivistic research is often, but not exclusively quantitative. Methods frequently involve measurements, questionnaires, observations and tests. In contrast, research from this paradigm of social constructionism is often, but not exclusively, qualitative. Qualitative researchers conduct research to understand participants’ experiences, views and perspectives, often in their natural environments (Bryman, 2004). The methods used vary, but can include interviews, observations, case studies and documentary analyses. This approach recognises that researchers themselves are not free from bias and seeks to acknowledge, and even value, their input (Bryman, 2004; Silverman, 2005).

In the past, there has been tension between quantitative and qualitative research perspectives. However, these ‘paradigm wars’ have now largely subsided (Bryman, 2006). Whilst the principles of the positivist paradigm were viewed as ‘gold standard’, it is now generally accepted that both paradigms have their uses under different circumstances. Silverman has suggested that the qualitative/quantitative debate is a perhaps a false dichotomy, with questionable purpose (Silverman, 2005 p.8):

“The whole ‘qualitative/quantitative’ dichotomy is open to question...we view many such dichotomies or polarities in social science as highly dangerous. At best they are pedagogic devices for students to obtain a first grip on a difficult field – they help us to learn the jargon. At worst, they are excuses for not thinking, which assemble groups of researchers into “armed camps”, unwilling to learn from one another.”

Pragmatism emerged in the 1980s as the ‘third way’ (Cresswell, 2003). Pragmatism allows researchers the freedom to choose methods and techniques that best meet their needs and purposes, borrowing from quantitative and qualitative assumptions when engaging in research (Cresswell, 2003). It is therefore considered a good basis for mixed methods research (Cresswell, 2003; Tashakkori & Teddlie, 2003). Pragmatist researchers use both quantitative and qualitative data because they work to provide the best understanding of the problem. ‘What works’ to solve the problem takes precedence over everything else. In this respect, I concur with the views of Silverman (2005 p.6):
“Any good researcher knows that choice of method should not be predetermined. Rather you should choose a method that is appropriate to what you are trying to find out.”

3.1.2 Rationale for a mixed methods approach

The aim of this study was to determine patterns of psychotropic prescribing in prisons and consider the extent to which people with mental illness have ‘equivalent’ access to psychotropic medicines in prison. I arrived at this aim because I wanted to ascertain the nature (qualitative), as well as the scale (quantitative), of psychotropic prescribing in prisons.

Adopting a mixed methods approach, grounded in a pragmatist philosophy allowed me to examine the problem from multiple angles and develop a ‘rich’ analysis of the problem that would not have been available to me had I used an exclusively qualitative or quantitative approach.

Three distinct studies were designed to respond to the research questions defined at the end of Chapter 2 (section 2.6):

- Study 1 – A retrospective case note review of psychotropic prescribing practices following reception into prison;
- Study 2 - A cross-sectional point prevalence study of psychotropic prescribing patterns in prisons; and
- Study 3 - A qualitative study of patient and staff perspectives on psychotropic prescribing in prisons.

Table 4 (page 71) provides an overview of the objectives, approaches and methods used for these three studies. Figure 2 (page 71) displays how the studies were sequenced: study one was conducted first, followed by studies two and three, which ran concurrently.
Table 4: Overview of study aims, approaches and methods

<table>
<thead>
<tr>
<th>Study</th>
<th>Research question</th>
<th>Objective</th>
<th>Approach</th>
<th>Method</th>
<th>Prisons</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>• To establish the proportion of psychotropic medicines reported at prison reception which are discontinued on entry to custody and reasons for discontinuation</td>
<td>Quantitative</td>
<td>Retrospective case note review</td>
<td>5 local prisons in the North of England</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
<td>• To establish the prevalence of psychotropic prescribing in prisons and compare rates with the general population</td>
<td>Quantitative</td>
<td>Cross-sectional survey of prescribing</td>
<td>4 prisons in the East of England</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
<td>• To explore prisoner and healthcare staff perceptions regarding the purpose of psychotropic prescribing in prisons</td>
<td>Qualitative</td>
<td>Semi-structured interviews with staff and patients</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
<td>• To investigate how prisoners and healthcare staff account for apparent differences in access to psychotropic medicines between prisons and communities</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Figure 2: The sequence of studies 1-3

3.1.3 Research governance and ethical approvals

The study was approved by the individual Primary Care Trusts (PCTs) responsible for healthcare at each site, either under audit/service development governance procedures
(study one) or research governance procedures (studies two and three). One prison was privately run, thus permission was gained from the private healthcare provider instead. In addition, approvals from Governors and Healthcare Managers at individual prisons were gained prior to the commencement of the study at each site. HM Prison Service approval was gained via the National Research Committee (Appendix B). Ethical approval was gained from Northern and Yorkshire Research Ethics Committee (REC), a prison-flagged REC (Appendix C). The Independent Scientific and Advisory Committee approved the use of data from the General Practice Research Database for comparison purposes (Appendix D).

3.2 Study 1

The first study focused on the prescription of medication for newly received prisoners entering custody. Reception health screening is the first stage in identifying health needs, including medication, and in determining the care that a prisoner will subsequently receive. Thus, it seemed logical to begin by focusing on this phase of the care pathway.

The topic of the pre-study emerged naturally as a line of inquiry from a study by Shaw et al. (2006) included in the literature review. The study found that amongst their sample of prisoners newly received into custody with current prescriptions of psychotropic medication, 64% did not receive that medication during their first month in custody. However, as previously noted, the reasons for this were not made clear by the study.

3.2.1 Aims and objectives

The aim of study one was to determine the extent to which the following standard, from Changing the Outlook (Department of Health & HMPS, 2001 p.21-22), was met:

“No one who has been in receipt of medication for a mental disorder should have it automatically withdrawn on entry into prison unless and until a proper psychiatric assessment has indicated that this is appropriate.”

Two objectives were identified, designed to respond to research question one (see section 2.6):
1. To establish the proportion of psychotropic medicines reported at prison reception which are discontinued on entry to custody; and

2. To establish the factors associated with discontinuation of medication.

Specifically, I aimed to test the following null hypothesis:

- There will be no significant relationship between psychiatric assessment in prison and discontinuation of psychotropic prescriptions in prison.

A third objective, whilst not formally stated, was to use the study as an opportunity to develop familiarity with the clinical information systems and prescribing procedures used in prisons. These experiences were used to inform the development of a feasible and robust methodology to be used in the studies that followed.

### 3.2.2 Sample

The fieldwork took place in five ‘local’ prisons between June 2008 and February 2009, all of which accepted remand and sentenced prisoners directly from court. All prisons were located in the North East or North West of England. Sites were recruited for inclusion in the study with the aim of reflecting a range of prisoner populations. The final sample comprised three prisons for adult males (including one with a high secure function), one YOI and women’s prison for adult and young women.

At each prison, a different calendar month was chosen during which prison records were sampled. Prison reception records were used to generate a list of all prisoners newly received into custody within that month. Prisoners transferred from other establishments were excluded.

In total, 95% (n = 1006) of the records eligible for inclusion were successfully reviewed (Table 5, page 74). Notably, the proportion of records successfully reviewed was lowest (66%) at Prison E, the YOI. This was because the prison had not yet installed an electronic clinical records system, relying on paper records instead. The vast majority (77%) of the records that could not be located were those of prisoners that had been transferred elsewhere, with their records travelling with them.
Table 5: Sampling

<table>
<thead>
<tr>
<th>Prison and type</th>
<th>New receptions in month, n</th>
<th>Records reviewed, n (%)</th>
<th>Mental health medication pre-custody, n (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prison A Adult male local</td>
<td>262</td>
<td>260 (99)</td>
<td>56 (22)</td>
</tr>
<tr>
<td>Prison B Adult male local</td>
<td>302</td>
<td>298 (99)</td>
<td>51 (17)</td>
</tr>
<tr>
<td>Prison C Adult and young female local</td>
<td>68</td>
<td>66 (97)</td>
<td>23 (35)</td>
</tr>
<tr>
<td>Prison D Adult male local</td>
<td>296</td>
<td>296 (100)</td>
<td>46 (16)</td>
</tr>
<tr>
<td>Prison E Male YOI</td>
<td>130</td>
<td>86 (66)</td>
<td>9 (10)</td>
</tr>
<tr>
<td>All</td>
<td>1058</td>
<td>1006 (95)</td>
<td>185 (18)</td>
</tr>
</tbody>
</table>

*a Denominator is percentage of new receptions in month.
*b Denominator is number of records reviewed.

3.2.3 Procedure

Clinical records were gathered and reviewed with assistance from prison healthcare staff, who worked alongside me and screened person identifiable data. In prisons in England and Wales, all prisoners undergo a standardised health screening questionnaire with a healthcare worker on reception into custody. Using the recorded responses to the screening questions, all cases were identified where a newly received prisoner reported being in receipt of prescribed psychotropic medication in the community. This was defined as any prescribed hypnotic, anxiolytic, antipsychotic, antidepressant and/or CNS stimulant medication, as listed in the BNF Chapter 4.1-4.4. All medicines listed within these chapters were included within the study, whether or not the individual reported they were being taken to treat a mental illness. A total of 185 records were found that met this criterion (Table 5).

In all 185 cases, the following details were extracted from the notes and recorded on individual data collection sheets (Appendix E):

- Name and dose of pre-custody medication recorded in the reception health screen (as reported by the prisoner);
- Details of communication between prison healthcare staff and community prescribers to verify prescriptions;
- Name and dose of medications prescribed in prison;

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11 As a minimum to be included as a case, either the name or the type of medication (e.g. ‘antidepressant’) had to be recorded.
Evidence of psychiatric assessment in prison (defined as any mental health assessment with a suitably qualified member of staff\(^\text{12}\)); and

Evidence of reasons documented for non-prescription, where applicable.

Following discussions with my supervisory team, a cut-off of one week from reception into prison was chosen for prescriptions to be continued. This cut-off time was chosen following discussions within the audit team. A week was seen to be the longest reasonable period within which busy local prisons (which often receive high volumes of prisoners late into the evening) could confirm prescriptions, without neglecting the immediate health needs of the patient. Thus, only entries made in records during the first week of custody were considered.

### 3.2.4 Analysis

Data were analysed using SPSS version 16 for Windows (2008). Individual medications were categorised in line with the chapters in the BNF (2010). Descriptive statistics (frequencies, percentages and 95% confidence intervals) were used to describe reported prescribed medication use prior to custody and within the first week of imprisonment. The key outcome measures were:

- The proportion of newly received prisoners who reported at prison reception being in receipt of a prescribed psychotropic medicine immediately prior to custody; and
- The proportion of all psychotropic medicines reported at prison reception which were continued (and discontinued) within seven days of reception into prison.

In addition, follow-up analyses were used to determine statistical associations between continuation/discontinuation of medication (outcome variable) and the following categorical independent variables:

- Response from a community prescriber stating there was no current valid prescription for the medication
- Prescription of a substitute medication from the same category of the BNF;
- Discharge (release/transfer);

\(^{12}\) This included psychiatrists, psychologists, CPNs, RMNs, dual diagnosis specialists or other suitably trained mental health professionals. This did not include GP consultations.
- Receiving a psychiatric assessment; and
- Patient refusal of medication.

As the independent and outcome variables were all dichotomous, chi-squared tests were used to test for associations. Significance was set at the P<0.05 level.

### 3.2.5 Learning from Study 1

The process of conducting the first study gave rise to several conversations, experiences and observations that had implications for the topic and design of studies two and three. The main points are summarised below.

- Staff viewed prescribing as an important, and sometimes controversial, part of the prison regime. They were easily convinced of the relevance of the topic and the potential benefits of improving prescribing practices. Therefore, the topic area was confirmed as worthwhile and interesting.
- There was a sense amongst staff that prescribing in prison, as both a process and in terms of the medications prescribed, was different from prescribing in community settings. It was important therefore that the study design offered opportunities for such comparisons to be drawn.
- Clinical information on prisoners was often located in multiple locations and formats (e.g. paper and/or electronic). This made data collection processes slow and laborious. Furthermore, paper records travelled with prisoners once they were transferred to other prisoners, removing the opportunity to collect data about prisoners who had since left. Thus, I was able to consider the limitations and opportunities afforded by the data routinely entered and held within this system.
- There were considerable differences between establishments in the way that they dealt with and verified prescriptions for newly received prisoners. Some prisons were much quicker and more consistent than others in making and responding to requests for information. Thus, I learned not to expect that practices between different prisons would necessarily be the same.
I learned that most prisons, at the time, were moving towards the adoption of a single electronic clinical records system called SystmOne. This promised procedural consistency across establishments and better organisation of clinical information. Crucially, this would also allow access to information on prisoners who had left the establishment.

3.3 Study 2

Following on from the first study, which looked at prescribing patterns on reception into custody, the second study focused on the prescription of psychotropic medication during imprisonment.

3.3.1 Aims, objectives and hypotheses

The aim of this study was to establish the prevalence of psychotropic prescribing in prisons and compare rates with the general population. The following objectives were identified:

- To establish rates of prescribing for hypnotics and anxiolytics, antidepressants, antipsychotics and CNS stimulants in prisons;
- To compare prescribing patterns in prisons with the wider community, taking into account age and gender differences;
- To identify the most commonly used medications prescribed in prison and community populations;
- To establish and compare the proportion of new generation antidepressant and antipsychotic medications prescribed in prison and community populations; and
- To determine the proportion of psychotropic medications in prison prescribed for appropriate clinical indications.

In addition, the following null hypothesis was defined:

- Psychotropic prescribing rates will not be significantly higher among prisoners than patients in the community population, after taking into account age and gender differences.
3.3.2 Design

A cross-sectional survey was designed to meet the objectives of the study. Cross-sectional designs involve collecting data on exposures and outcomes in a population at a single point, or cross-section, in time (Cresswell, 2003). They are often used to estimate prevalence rates of a given outcome in a population, commonly as part of descriptive or hypothesis generating studies. Cross-sectional studies have the advantage of being relatively quick and inexpensive to administer in comparison with other designs, such as cohort studies, in which data are collected over a longer period of time. The single point design, however, means that cross-sectional studies can only be used to establish associations, rather than causal relationships between variables of interest. Thus, it is not possible, from a cross-sectional study, to determine whether exposure to imprisonment causes particular medications to be prescribed, only that the two are associated. In cases where either the outcome or exposure is rare, cross-sectional studies can be inefficient, requiring large samples; in such circumstances an alternative design, such as a case-control study, may be preferable. Case-control studies, however, cannot be used to yield prevalence estimates. On balance, a cross-sectional survey was judged to be the most appropriate design for establishing prevalence rates, which was the primary goal of the current study.

Although higher than some countries, imprisonment is still a relatively rare exposure among the general UK population (155 per 100,000 of the population) (International Centre for Prison Studies, 2011). Thus, it was not practical to use a single cohort of randomly selected people from the general population. Instead, a comparative two-sample design was used: a sample of patients in prison and a control group of community-based patients. From study one, it was clear that the main outcome being measured (prescriptions for psychotropic medication) was relatively common in prison. Data on exposure and outcomes, as well as population denominators (total prison population), were accurately recorded in this population and readily available on locally held databases, thus reducing the risk of non-response bias. In the control group, prescriptions for psychotropic medication were assumed to be less common, but not rare. Furthermore, a large, pre-existing database containing relevant data on a random sample of GP-registered patients was known to be available.
A point prevalence study design was selected, meaning that prescribing rates would be determined on a single day. Period prevalence rates were also considered (quarterly or annual). However, these were ruled out for two reasons; a) as I had discovered in study one, the limitations of prison records systems meant that it could be more difficult to follow up prisoners who had since left establishments, reducing data completeness and b) the added difficulty of calculating population denominators, needed to calculate rates of prescribing, in busy, local prisons with transient prisoner populations.

### 3.3.3 Prisons

All prisons recruited to the study were from the East of England region. The East of England region includes 14 prisons and about 8,000 prisoners, representing a sizeable proportion (approximately 10%) of the prison estate in England and Wales. Originally, I had planned to select a range of establishments through England and Wales. However, during the planning stage an opportunity arose to recruit a number of prisons from the East of England. I chose the latter option because it offered a number of methodological and practical advantages. Firstly, concentrating efforts on prisons in one region of England (all within NHS East of England) offered the most potential for generating conceptually coherent findings. Any differences in prescribing patterns found by the study were less likely to be attributable to differences in the local population or prescribing policies. Secondly, given the limits on time and resources⁴, focusing the study on a single region represented a more realistic goal and reduced the overall number of prisons required to participate. It also made recruiting and negotiating access to establishments quicker and easier, with better communication with each of the prisons. Thus, this strategy enhanced external validity at a regional level and had a number of practical benefits.

A number of strategies were used to recruit sites. Healthcare managers and pharmacy leads were approached at regional meetings. Invitations to express interest in participating in the study were included in regional newsletters and were sent directly via email mailing lists. Establishments housing individuals aged 18 years and under exclusively were not invited to participate as prescribing guidelines differ for children and young people. Four of the 14 prisons operating in the East of England at the time were subsequently recruited to the

⁴ There was no specific funding for this study.
study, with a combined operational capacity of approximately 2,500 prisoners. The names of these establishments have been omitted and replaced with a letter (A-D) in order to safeguard the anonymity of participants. A summary description of each of the sites recruited to the study is provided below.

- **Prison A** – A category B local prison which accepts remand and convicted adult male prisoners directly from the courts. It has a capacity of around 500 prisoners.
- **Prison B** - A category C training prison which accepts convicted and sentenced prisoners, both adults and young offenders. It has a capacity of around 700 prisoners.
- **Prison C** - A local prison which accepts remand and convicted (Cat B, C or D) adult male prisoners and young offenders. It has a capacity of around 800 prisoners.
- **Prison D** - A privately run prison which accepts adult and young women, whether on remand or convicted. It has a capacity of around 400 prisoners.

### 3.3.4 Community (GPRD) comparison data

For comparison purposes, a dataset on a random sample of patients in the community was obtained from the General Practice Research Database (GPRD), under a free license scheme funded by the Medical Research Council. The GPRD is a computerised database of anonymised longitudinal medical records from primary care that is linked with other healthcare data. Currently data are being collected on over 3.6 million active patients (approx. 13 million in total) from around 488 UK primary care practices. It is the largest and most comprehensive source of data of its kind in the world (Box 2, page 81).

All GPRD patients who were a) alive, b) aged 18 years or over and c) registered with a GP in the East of England throughout 1st February and 30th July 2010 were included in the study, yielding a final sample of 138,803 men and 141,365 women. GPRD supplied anonymised patient-level data for all community-based patients that met the inclusion criteria and were prescribed at least one prescribed psychotropic medication (any product listed in BNF chapters 4.1-4.4) between 1st February and 30th July 2010 (n=39,916). Previous population

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14 The GPRD Group has obtained ethical approval from a Multi-centre Research Ethics Committee (MREC) for all purely observational research using GPRD data; However separate REC approval is required for any study, including the current study, which includes any form of direct patient involvement.
comparisons have indicated that GPRD patients are representative of the general UK population with respect to age and gender (Office for National Statistics, 2000).

**Box 2: The General Practice Research Database (GPRD) www.gprd.com**

The GPRD is the largest and most representative primary care database in the UK, containing health data on over 4 million active patients. A well-regarded and powerful research tool, it has been used extensively for observational research in primary care, generating over 700 peer reviewed publications to date. Data are collected using routinely collected data via GP electronic clinical records systems. Datasets available to researchers comprise anonymised patient records, including clinical data on diagnoses, prescribing, co-morbidity and demographic details.

GPRD datasets are restricted to general practices and patient records that consistently meet predefined thresholds for levels of quality and completeness, supplying data that is fit for use in research. Only patient data from practices that are ‘up to standard’ are included in research datasets. Individual patient records are also checked for validity issues that would render them ineligible for use in research, including: an empty or invalid first registration date; absence of a record for a year of birth; a first registration date prior to their year of birth; and recorded healthcare episodes in years prior to birth year.

### 3.3.5 Sample size calculation

In prevalence studies, confidence intervals depend on three factors: sample size, percentage and population size. Sample size calculations are used to estimate the number of cases needed to meet the required level of precision for prevalence estimates. They are also used to estimate the number of cases needed to power any planned statistical analyses, for example a comparison of percentages between two groups. Whilst underpowered studies are susceptible to Type 2 error (failure to reject the null hypothesis when the alternative hypothesis is true), oversized studies should also be avoided as these may waste time and resources, and could potentially be unethical if too many participants are subjected to the exposure or research activity.
In the current study, it became clear that the sample size would inevitably be limited by two factors: the size of the GPRD dataset available and the number of prisons that volunteered to participate. Using a combination of the prevalence estimates of prescribing generated in study one and population figures at each participating prison, I calculated the number of prisoners expected to be in receipt of prescriptions for psychotropic medication at the four prisons recruited (Table 6, below). On the basis of these figures, I decided that no formal sample size calculation was needed; rather than selecting a random sample of prisoners, it would be necessary to include all prisoners at each prison in order to generate sufficient cases for the planned analyses. Subsequently, all prisoners aged 18 years and over and in custody at participating prisons on census days were included in the survey, yielding a final sample of 2,222 men and 341 women.

This was not an inefficient strategy. Firstly, prevalence figures from the pre-study work suggested that certain prescription types (e.g. antipsychotics) were relatively uncommon. Therefore, I wanted to identify all cases of psychotropic prescribing in order to generate sample sizes large enough to generate precise prevalence estimates, with a low margin of error, and to perform subgroup analyses (see worked example in Box 3, 83). Secondly, within the confines of a limited sample, this approach thus helped to increase the precision of prevalence estimates in prisons (yielding narrower confidence intervals).

Table 6: Estimated proportion of prisoners in receipt of psychotropic medication

<table>
<thead>
<tr>
<th>BNF chapter</th>
<th>Medication type</th>
<th>Estimated prevalence (%) of prescribing</th>
<th>Estimated number of patients prescribed medications in 4 prisons</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.1</td>
<td>Hypnotics &amp; anxiolytics</td>
<td>6</td>
<td>144</td>
</tr>
<tr>
<td>4.2</td>
<td>Antipsychotics</td>
<td>3</td>
<td>72</td>
</tr>
<tr>
<td>4.3</td>
<td>Antidepressants</td>
<td>12</td>
<td>288</td>
</tr>
<tr>
<td>4.4</td>
<td>Stimulants and ADHD</td>
<td>No figures available</td>
<td>-</td>
</tr>
<tr>
<td>4.1-4.4</td>
<td>Any</td>
<td>19</td>
<td>456</td>
</tr>
</tbody>
</table>

1 Based on figures from study one for self-reported use of prescribed medication among adult male prisoners.
2 Based on prevalence multiplied by the total operational capacity of 4 recruited prisons (n=2,400).
3 No cases of stimulant prescription were observed amongst adult male prisoners in study one.

Given that the study was purely observational and data collection caused no consequences or inconvenience to individual patients, this approach was not considered unethical. It increased the time needed to collect the data at each site; however, having previously conducted study one, which involved a similar methodology, this was still considered
achievable. A very large dataset was provided by the GPRD for comparison purposes. The size of this dataset not only enhanced the precision of community prevalence estimates, but also helped to increase the power of statistical analyses comparing rates of prescribing in prison and the community (Box 3). Thus, in advance of the study I was as certain as I could be that the study would be well-powered enough to detect differences in the prevalence of prescribing between prison and the community, even within medication subgroups\textsuperscript{15}.

**Box 3: Sample size and power calculations: worked examples\textsuperscript{2}**

**Example 1:** This shows how increasing sample sizes are needed to generate increasingly precise prevalence estimates.

Question: What sample size is required to estimate the prevalence of atypical antipsychotic prescriptions among all those prescribed antipsychotics (n=72), with a 95% level of confidence where use of atypical drugs is estimated at 50\%\textsuperscript{2}:

- a) With a 5\% margin of error? Answer: 61
- b) With a 3\% margin of error? Answer: 68
- c) With a 1\% margin of error? Answer: 72

**Example 2:** This shows how a large control sample can increase power to detect statistical differences between proportions in two groups.

Question: If we expect a difference of 20\% (30\% vs. 50\%) between the prevalence of atypical antipsychotics prescribed among all those prescribed antipsychotics in prison (n=72) and in the community (n=72), what is the chance (power) of detecting a significant difference (p=.05, two sided):

- a) If we sample two equal sized groups (n=72)?
  Answer: 69\%

- b) If we sample two unequal sized groups (n=72, prison; n=720, community\textsuperscript{3})?
  Answer: 92\%

\textsuperscript{2}Sample sizes derived from http://sampsize.sourceforge.net/iface/index.html#prev.

\textsuperscript{3}Using 50\% where the estimated prevalence is unknown generates the largest possible sample size and is therefore the most conservative strategy.

\textsuperscript{3}Sample size was unknown prior to the analysis, but was conservatively estimated to be at least 10 times larger, given the population size (n=280,168).

\textsuperscript{15} With the exception of stimulants, which on the basis of the pre-study and anecdotal information, appeared to be used very little in prisons.
### 3.3.6 Data collection procedures

A census day on which to identify all patients in receipt of psychotropic medication was agreed with each participating prison individually. Dates were dependent on access arrangements and thus varied between sites (18th August 2010 to 14th April 2011).

For ethical reasons, healthcare (nursing or pharmacy) staff at each prison were nominated to identify patients and to access records in order to collect anonymous data on individual patients. These members of staff were given data collection manuals, which detailed instructions for identifying patients prescribed psychotropic medicines, using electronic clinical information systems, and extracting data from individual medical records. Furthermore, at two prisons (B and D) I was able to visit members of staff in prison to give specific training in how to undertake the data collection.

At the time of data collection, there were a number of electronic clinical information systems available to prisons, all of which enable users to search and manage a database of patient clinical records, holding patient-level information on prescriptions, GP consultations, referrals to specialist health services and other significant health events. SystmOne was being rolled out across the prison estate nationally and was in use at all four establishments that participated in the study.

On the census day, healthcare staff used SystmOne to perform an automated search of all current prisoners’ clinical records, to generate a list of all prisoners currently in receipt of psychotropic medication. Usefully, SystmOne enables users to search on medication type, using the categories of the BNF; thus, the search included any medication listed in BNF 4.1-4.4). However, SystmOne only records the date a prescription was issued by the doctor, therefore users can only search records based on the prescription date rather than whether an individual is currently in receipt of medication. To account for this, the search identified all individuals who had been prescribed psychotropic medication within the last 28 days. At the time of data collection, 28 days was the maximum prescription length available to prescribers in prison settings, therefore this list included all those with a valid prescription covering the census day. Individual medical records were then systematically checked to exclude individuals with acute prescriptions (<28 days) that ended prior to the census day. At one establishment (Prison D), SystmOne was in use, but not for issuing prescriptions, so this procedure was modified. Instead, individual paper medicines administration records
(‘drug kardexes’) were manually checked by an experienced pharmacy technician to identify all individuals prescribed psychotropic drugs on the census day.

Lists of prisoners prescribed psychotropic medicines were cross-checked with the prison population database system (C-NOMIS) to check that individuals were still in custody on the census day and had not been discharged. On the census day, C-NOMIS was used to generate accurate up-to-date population counts, stratified by year of birth, for use as denominators when calculating age-stratified prescribing rates.

For each individual in prison and in receipt of psychotropic medication on the census day, the following data items were collected and recorded on a paper data collection form (Appendix F):

- Demographic data - including gender, legal status, ethnicity, year of birth and date received into custody;
- Physical and mental health diagnoses recorded at reception into custody- including diabetes, epilepsy, heart/respiratory disease, kidney failure, liver failure/hepatitis, pregnancy, alcohol abuse, drug abuse, mental health problems and self-harm/suicide risk;
- Psychotropic medication prescription details - including drug name, daily dose, formulation (e.g. tablet or liquid), the indication/diagnosis recorded for the drug (if any), whether or not the drug was continued from a pre-existing prescription in the community, date of first prescription in custody and prescriber; and
- Non-psychotropic medication prescription details – name only.

3.3.7 Dataset preparation

Using Stata version 10 software (StataCorp, 2008), the prison data were entered into two separate datasets (one for patients and one for prescriptions), linked by a unique patient identifier generated for the purposes of this research. Data were checked for errors made during data collection/entry. Duplicates were identified and excluded. Range checks were performed to identify impossible numerical values. Consistency checks were used to check for invalid combinations of values (e.g. pregnancy and male gender). Where necessary,
continuous (e.g. daily dose) or ordinal variables (e.g. ethnicity) were transformed to form additional categorical variables (e.g. under/over BNF maximum; white/non-white).

Each psychotropic medicine prescribed in prison was individually categorised using the four categories within the BNF (4.1-4.4). Furthermore, for every prescription, the individual indication/diagnosis was compared with the indications listed in the BNF entry for the particular drug prescribed. Subsequently, it was possible to classify each prescription as either:

- Indicated - the indication for the drug was recorded and upheld in the BNF, including licensed and unlicensed uses;
- Not indicated - the indication for the drug was recorded but not upheld in the BNF; or
- No diagnosis - no indication was recorded for the drug.

GPRD data were, because of the sheer volume of data, provided as a series of plain text files, organised under different headings and linked by an anonymous patient identifier. The files most relevant to this research were:

- Patients (n=39,916) – contained basic patient demographics including unique patient identifier, gender and year of birth; and
- Therapy (divided over 2 files: n=15,095,300; n=10,175,027) - contained details of all prescriptions issued by the GP (ever, including non-psychotropic prescriptions), event date, product code (using the Multilex product code system), BNF code (chapter and section of BNF), total quantity prescribed, quantity of tablets per day and dose.

GPRD, like SystmOne, only records the date a prescription was issued. Given that the longest period for which prescriptions are issued tends to be 6 months, I requested full records for all individuals prescribed at least one psychotropic medication within a 6 month period (1st February and 30th July 2010) leading up to the chosen census day (30th July 2010). Thus, the dataset supplied (within the ‘therapy’ files) contained details of all prescriptions, including non-psychotropic prescriptions that had ever been issued to the patient at that particular general practice. Therefore, further preparation was required to identify only those prescriptions that were for psychotropic medication, which were valid on the chosen census date of 30th July 2010.
Initially, the files were too large to handle in statistical packages such as Stata, therefore they were imported into a Microsoft Access relational database for further processing to select the required sample and prepare the data for analysis. The procedures undertaken to identify prescriptions of interest and deal with missing data are summarised briefly in Box 4.

**Box 4: GPRD dataset preparation**

1. I identified all individual prescriptions between 1st February and 30th July 2010 (and excluded the rest).
2. I then identified all individual prescriptions for drugs listed in BNF 4.1-4.4 (and excluded the rest).
3. I then created a new binary variable to identify whether or not each prescription had information on the quantity of tablets to be taken per day.
4. For all prescriptions with information on the quantity of tablets to be taken per day, I used these data together with data on the total quantity of tablets prescribed to determine the duration of the prescription (prescription duration=total quantity/total quantity per day).
5. For all prescriptions without information on the quantity of tablets to be taken per day (20% of prescriptions), I estimated the duration of the prescription based on the average prescribed daily dose, using the WHO’s Defined Daily Dose system (prescription duration=(strength/ddd)*qty).
6. Next, I added the treatment duration to the prescription date to determine the range of dates each prescription covered.
7. Finally, I removed all prescriptions that ended prior to the census day.

See Appendix G for a detailed ‘analysis log’.

### 3.3.8 Analysis

The main outcome measures to be used by this study were point prevalence rates (percentages and 95% confidence intervals) of prescribing for different types of psychotropic medication, and subgroups within them (e.g. typical vs. atypical antipsychotics). Descriptive and statistical analyses were performed using Stata. Within
each sample (prison and community), percentages and associated 95% confidence intervals were used to estimate point prevalence rates each of the outcomes below.

- The proportion of people in prison and in the community who were prescribed: hypnotics or anxiolytics; antipsychotics; antidepressants; CNS stimulants; and any psychotropic drug.
- Among patients prescribed a psychotropic drug, the proportion that were prescribed each individual medication.
- Among patients prescribed antidepressants in prison and in the community, the proportion of people who were prescribed SSRIs and non-SSRIs.
- Among patients prescribed antipsychotics in prison and in the community, the proportion of people who were prescribed atypical (newer) antipsychotics and typical (older) antipsychotics.
- The proportion of prescriptions in prisons that were: indicated, not indicated or had no recorded indication.

As figures 3 and 4 (page 89) illustrate, prisoners were younger and more likely to be male than their community counterparts. When making comparisons between prison and the community, two strategies were used to account for differences in age and gender. Firstly, rates of prescribing were stratified by gender. Secondly, prescribing rates were indirectly standardised following procedures outlined by Kirkwood and Sterne (2003), to account for differences in age distribution. This involved applying age-specific prescribing rates from the community sample (in this case, the ‘standard’ population), to the age structures of the prison population to estimate the expected rates for that population. Subsequently, rates of prescribing amongst prison and community samples were compared using chi squared tests and prevalence rate ratios (PPRs).

### 3.3.9 Summary

This chapter has described the rationale for a mixed methods study of psychotropic prescribing patterns in prisons, rooted in pragmatism. Methods for study one and study two, which are both quantitative in nature, were described. In summary, a retrospective case note review was designed to answer research question 1, with the aim of establishing the proportion of psychotropic medicines reported at prison reception which were
discontinued on entry to custody and reasons for discontinuation. A cross-sectional, point-prevalence study was designed to answer research question 2, with the aim of establishing the prevalence of psychotropic prescribing in prisons and comparing rates with the general population. The next section will describe the findings of the first two studies.

**Figure 3:** Gender breakdown for prison and community samples

![Gender breakdown chart](chart1.png)

**Figure 4:** Age structure of prison and community samples

![Age structure chart](chart2.png)
4. Findings: Part 1

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4.1 Paper 1

Continuity of psychiatric medicines supply for newly received prisoners

Hassan L, Senior J, Edge D & Shaw J.

*The Psychiatrist* (2011) 35: 244-248

Accepted for publication 16 December 2010
Abstract

Aims and Method
To estimate the proportion of psychiatric (antidepressant, antipsychotic and hypnotic/anxiolytic) medicines reported at prison reception that are discontinued on entry to prison; retrospective case note review was undertaken at five English prisons between June 2008 and March 2009.

Results
Of the 1006 records sampled, 18% (n=185) reported that prisoners had been prescribed psychiatric medication prior to custody. Altogether, 240 separate psychiatric medicines were recorded among prisoners at reception. Of these, 47% (n=112) were not prescribed during the first week of custody. In only 11% (n=12) of cases where medication was discontinued had psychiatric assessment been completed.

Clinical implications
Prison mental health policy states that psychiatric medication should not be withdrawn in custody without proper clinical assessment. Denial of medication in the absence of clinical assessment during early custody has the potential to create additional stress during a period of increased vulnerability and risk.

Introduction

The recent Bradley report (Bradley, 2009) has renewed interest in the mental healthcare of offenders. In response, the last government launched an ambitious delivery plan making a commitment to increase support for the growing number of people with mental illness in prison and elsewhere in the criminal justice system (Department of Health, 2009c). At its heart are the notions of working in partnership, continuity of care, and equivalence: the premise that prisoners have the right to the same standard and quality of healthcare as the wider community.

Medication is a cornerstone of modern psychiatric care (Bullmore et al., 2009). Appropriate prescribing in prisons can have a positive impact on individual patients and the prison
regime as a whole by helping to reduce symptom severity, violence and aggression and illicit drug taking so that individuals can participate in purposeful activity (Department of Health, 2003b; Dolan et al., 2003). Current UK prison mental health policy states that prescribed medication should not be automatically stopped on entry to prison without proper psychiatric assessment (Department of Health & HMPS, 2001). Indeed, abrupt cessation of psychiatric medicines may precipitate discontinuation symptoms and even relapse (Bullmore et al., 2009; Haddad & Anderson, 2007). Nonetheless, a common complaint amongst prisoners is that medication for mental health problems is frequently either withheld temporarily or stopped completely when they are received into custody (Bowen et al., 2009; Condon et al., 2007; Plugge et al., 2008). This problem should not be dismissed lightly given the increased risk of self-harm and suicide during the early period of custody (Shaw et al., 2004).

This study aimed to a) identify all prisoners who reported being prescribed psychiatric medication at prison reception and b) estimate the proportion of prescriptions for psychiatric medications that were continued on entry to prison. It also sought to establish the factors associated with discontinuation of medication.

Method

Sample
We undertook a retrospective case note review at five prisons located in Northern England, all of which accepted remand and convicted prisoners directly from court. Data were collected between June 2008 and March 2009. Sites participated on a voluntary and confidential basis and were selected to represent a range of prisoner populations (Table 1, page 94).

At each prison, a calendar month was chosen during which prison records were sampled. Prison reception records were used to generate a list of all prisoners newly received into custody within that month. Prisoners transferred from other establishments were excluded. We gathered and reviewed clinical records, with assistance from prison healthcare staff. In total, 95% (n=1006) of the records eligible for inclusion were successfully reviewed (Table 1). Availability of records was lowest in Prison E, the only prison at which an electronic records system had not yet been introduced.
Table 1: Sampling

<table>
<thead>
<tr>
<th>Prison and type a</th>
<th>New receptions in month, n</th>
<th>Records reviewed, n (%) b</th>
<th>Mental health medication pre-custody, n (%) c</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prison A</td>
<td>262</td>
<td>260 (99)</td>
<td>56 (22)</td>
</tr>
<tr>
<td>Prison B</td>
<td>302</td>
<td>298 (99)</td>
<td>51 (17)</td>
</tr>
<tr>
<td>Prison C</td>
<td>68</td>
<td>66 (97)</td>
<td>23 (35)</td>
</tr>
<tr>
<td>Prison D</td>
<td>296</td>
<td>296 (100)</td>
<td>46 (16)</td>
</tr>
<tr>
<td>Prison E</td>
<td>130</td>
<td>86 (66)</td>
<td>9 (10)</td>
</tr>
<tr>
<td>All</td>
<td>1058</td>
<td>1006 (95)</td>
<td>185 (18)</td>
</tr>
</tbody>
</table>

YOI; Youth Offenders Institution

*Names omitted to preserve confidentiality.

b Denominator is percentage of new receptions in month.

c Denominator is number of records reviewed.

**Procedure**

Using reception health screening records, we identified all cases where a prisoner reported being on psychiatric medication prior to custody. This was defined as any prescribed antidepressant, antipsychotic, hypnotic, anxiolytic and/or Central Nervous System (CNS) stimulant medication, as listed in the British National Formulary (BNF) Chapter 4.1-4.4 (BNF, 2010). A total of 185 records met this criterion (Table 1).

In all 185 cases, the following details were extracted from the notes: name and dose of pre-custody medication (as reported by the prisoner); details of communication between prison healthcare staff and community prescribers to verify prescriptions; name and dose of medications prescribed in prison; evidence of psychiatric assessment in prison; and evidence of reasons documented for non-prescription, where applicable. Following discussions within the study team, a cut-off of one week from reception into prison was chosen for prescriptions to be continued or evidence of reasons for discontinuation to be discerned. Thus, only entries made in records during the first week of custody were considered.

**Analysis**

Data were analysed using SPSS version 16 for Windows (SPSS Inc., 2008). Individual medications were categorised in line with BNF chapters (BNF, 2010). Descriptive statistics (frequencies and percentages) were used to describe reported prescribed medication use prior to and during custody. We calculated 95% confidence intervals for key findings. Chi-squared tests were used to test for associations between categorical variables. Significance was set at the p<.05 level.
Results

Table 2: Psychiatric medications reported at prison reception, by BNF chapter

<table>
<thead>
<tr>
<th>Prison</th>
<th>Hypnotics/anxiolytics n (%)</th>
<th>Antipsychotics n (%)</th>
<th>Antidepressants n (%)</th>
<th>CNS(^a) stimulants n (%)</th>
<th>Any n (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>26 (43)</td>
<td>2 (3)</td>
<td>32 (53)</td>
<td>0 (0)</td>
<td>60 (100)</td>
</tr>
<tr>
<td>B</td>
<td>21 (28)</td>
<td>16 (21)</td>
<td>38 (51)</td>
<td>0 (0)</td>
<td>75 (100)</td>
</tr>
<tr>
<td>C</td>
<td>16 (50)</td>
<td>2 (6)</td>
<td>14 (44)</td>
<td>0 (0)</td>
<td>32 (100)</td>
</tr>
<tr>
<td>D</td>
<td>14 (23)</td>
<td>12 (20)</td>
<td>35 (57)</td>
<td>0 (0)</td>
<td>61 (100)</td>
</tr>
<tr>
<td>E</td>
<td>5 (42)</td>
<td>2 (17)</td>
<td>5 (42)</td>
<td>0 (0)</td>
<td>12 (100)</td>
</tr>
<tr>
<td>All</td>
<td>82 (34)</td>
<td>34 (14)</td>
<td>124 (52)</td>
<td>0 (0)</td>
<td>240 (100)</td>
</tr>
</tbody>
</table>

\(^a\) CNS; Central Nervous System

Prescribed medication prior to custody

Eighteen percent (95% CI 16-21%) of newly received prisoners reported being prescribed psychiatric medication prior to custody (Table 1). Women were more likely to report being in receipt of psychiatric medication than men ($x^2=12.7$, $p<0.001$). Prisoners arriving at the male Young Offenders Institution (YOI) were less likely than those at other prisons to report being in receipt of psychiatric medication ($x^2=3.9$, $p=0.047$).

In total, the 185 prisoners identified 240 separate psychiatric medications at prison reception (Table 2). Of these, antidepressants accounted for approximately half of all medications (52%), followed by hypnotics/anxiolytics (34%) and antipsychotics (14%). No prisoners in the sample reported being in receipt of CNS stimulants. Most (58%) prisoners reported being in receipt of only one psychiatric medication, 28% said they received two different medications and 15% reported three or more. Women were more likely than men to report being prescribed two or more psychiatric medications (70% vs. 40%; $x^2=16.4$, $p<0.001$).
Table 3: Proportion of psychiatric medication continued ≤7 days of reception into custody, by BNF chapter

<table>
<thead>
<tr>
<th>Prison</th>
<th>Hypnotics/anxiolytics n (%)</th>
<th>Anti-psychotics n (%)</th>
<th>Anti-depressants n (%)</th>
<th>Any n (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>14 (54)</td>
<td>1 (50)</td>
<td>27 (84)</td>
<td>42 (70)</td>
</tr>
<tr>
<td>B</td>
<td>10 (48)</td>
<td>10 (63)</td>
<td>24 (63)</td>
<td>44 (59)</td>
</tr>
<tr>
<td>C</td>
<td>8 (50)</td>
<td>0 (0)</td>
<td>8 (57)</td>
<td>16 (50)</td>
</tr>
<tr>
<td>D</td>
<td>3 (21)</td>
<td>6 (50)</td>
<td>13 (37)</td>
<td>22 (36)</td>
</tr>
<tr>
<td>E</td>
<td>1 (20)</td>
<td>1 (50)</td>
<td>2 (40)</td>
<td>4 (33)</td>
</tr>
<tr>
<td>All</td>
<td>36 (44)</td>
<td>18 (53)</td>
<td>74 (60)</td>
<td>128 (53)</td>
</tr>
</tbody>
</table>

Prescriptions during custody

For each of the individual psychiatric medications identified at prison reception, we determined whether the medication was continued within one week of reception into custody. Fifty three percent (95% CI 47-60%) of all prescriptions were continued within one week of reception into custody, although prescribing rates varied between prisons (33-70%; Table 3). Hypnotics/anxiolytics were less likely to be continued than other medication types (\(x^2=4.5, p=0.035\)). Women were no more likely than men to have their medication continued (\(x^2=0.2, p=0.685\)).

Overall, 47% (n=112) of prescriptions were not continued within one week of arrival into prison. In two (2%) cases this was because prisoners refused their medication in prison. The following factors were positively and significantly associated with discontinuation of medication (see Appendix H): response from a community prescriber stating there was no current, valid prescription for the medication (21%, n=23; \(x^2=18.1, p<0.001\)); prescription of a substitute medication from the same BNF chapter (17%, n=19; \(x^2=23.6, p<0.001\)); and discharge (release/transfer) within the first week of custody (21%, n=23; \(x^2=9.4, p=0.002\)). Receiving a psychiatric assessment within the first week of custody was not associated with discontinuation of medication (11%, n=12; \(x^2=0.2, p=0.667\)). In 43% (n=48) of cases where psychiatric medication was discontinued, the prisoner remained in custody for at least one week and there was no evidence of patient refusal, disconfirmation from a community prescriber, provision of substitute medication or psychiatric assessment.
Discussion

Almost a fifth (18%) of prisoners entering prison reported that they were currently receiving prescribed psychiatric medication. However, prescriptions for 47% of the medications reported at prison reception were not continued during the first week of custody, in many cases (43%) without a discernible reason.

Confidence can be drawn from the large number of patient records sampled in this study, comprising 95% of those eligible for inclusion. This was largely due to the assistance of local prison healthcare staff and availability of electronic record systems in all but one prison. Nonetheless, as only local prisons in the North of England were sampled, care must be taken when generalising our findings to other prison types or geographical regions. Furthermore, we were only able to capture entries made in clinical records during the first week of custody; unrecorded clinical activity or entries made outside this period would have been missed. Similarly, we did not seek to determine whether medication was actually dispensed or administered to the patient.

Our findings are consistent with those of previous studies (Bowen et al., 2009; Condon et al., 2007; Plugge et al., 2008), confirming that the supply of psychiatric medicines is often interrupted for newly received prisoners. Previously published research in this area has been largely small-scale and qualitative. Whilst such studies have the advantage of generating rich data on participant experiences, in doing so they necessarily focus on prisoner self-report. By using clinical records, this study was uniquely able to evidence and quantify the extent of continuity of prescribing between community and prison. In cases where prisoners were not prescribed the same medication in prison, we sought to discern the reasons behind this: where clarification from outside services had revealed that a prisoner had not been prescribed that medication in the community or where a substitute medication had been prescribed in custody, for example.

Current UK best practice guidelines advise that stopping or reducing doses of psychiatric drugs should be done on a gradual basis with careful monitoring (NICE, 2009a, 2009b). Furthermore, prison mental health policy clearly states that medication for mental disorder should not be automatically withdrawn on entry into prison without proper clinical assessment. (Department of Health & HMPS, 2001) Yet, the findings of this study indicate that in almost half of cases continuity of medicines supply was disrupted on entry into custody, often without any discernible reason recorded in the notes.
In some cases in this study we can logically infer that medication was discontinued as a result of active decision-making processes; this would include cases where substitute drugs were given, medications were disconfirmed by community prescribers and/or psychiatric assessments were completed. In other cases mitigating circumstances were present, such as prisoners being in custody for very short periods, leaving prison staff insufficient time to verify and arrange prescriptions. However, in almost half (43%) of cases where medication was discontinued, none of these conditions applied. It is not clear whether prescriptions were deliberately stopped for reasons not identified by this study or if medication needs were simply overlooked. However, taken in the context of studies citing significant prisoner distress caused by changes to medication (Bowen et al., 2009; Condon et al., 2007; Plugge et al., 2008), this finding is concerning.

We do not dispute that managed discontinuation of medication may, where appropriate, have the potential to benefit a patient. Indeed, patients themselves might request to reduce or stop their medication (two patient refusals were noted in this study). Abrupt withdrawal of psychiatric medication without proper clinical management, however, can have potentially serious health consequences for a patient. Discontinuation symptoms can include marked psychological and somatic symptoms (e.g. anxiety, insomnia and dizziness) and can start abruptly within a few days of stopping medication (Lejoyeux & Ades, 1997; Moncrieff, 2006a, 2006c). Moreover, there may be a risk of relapse of the underlying condition. If medication is withdrawn against the wishes of the patient, it may also contribute to feelings of powerlessness and mistrust, and could discourage prisoners from taking responsibility for managing their illness (Bowen et al., 2009). Denial of medication immediately following entry to prison also potentially adds to risk at an already distressing time; indeed, a third of all UK prison suicides occur within the first week in custody (Shaw et al., 2004).

We recognise that prison healthcare staff work in high pressure environments, with the added challenge of balancing security needs with prisoners’ health needs. Newly received prisoners frequently arrive at reception en masse, often outside of normal GP hours and without any physical evidence of existing treatment plans or prescriptions. Furthermore, because of the high incidence of illicit drug abuse in prisons, certain medications can become ‘currency’. There is also a commonly held perception amongst staff that some prisoners may make false claims in order to extract valued medication from prescribers (Bowen et al., 2009). This might explain why this study found that hypnotics/anxiolytics...
were the least likely medication type to be continued in custody. Complete discontinuation, however, may be a clinically risky strategy given that abrupt cessation of some medications of this type have been associated with severe discontinuation symptoms, including seizures (Fialip et al., 1987).

In highlighting the specific case of the prescription of psychiatric medication, the findings of this study allude to issues arguably endemic in prison healthcare: risk, mistrust, role conflict and poor information sharing systems. Such factors complicate the process of continuing prescriptions for those genuinely in receipt of psychiatric medication: in the words of an ex-prisoner, “not all prisoners are addicts or skivers, yet we are treated as if we are”(Mellor, 2003 p.59). Nonetheless, we noted differences in prescribing rates between establishments, which suggests local variation in practices and procedures. If individual prisons have developed systems that better support continuity and equivalence of care for prisoners with mental illness, this may be a cause for some optimism, and fuller exploration of such local strategies is warranted to determine whether these ostensibly successful practices can be replicated elsewhere. Usefully, there appears to be a wealth of existing guidance under the heading of medicines reconciliation (National Institute of Health and Clinical Excellence (NICE), 2007; National Prescribing Centre, 2008) relevant to developing effective systems for recording medication information amongst patients being admitted to hospital, which could readily be applied to prison settings. Recommendations for standardising information gathering procedures, establishing minimum datasets of medication information and clarifying the roles and responsibilities of staff involved would appear to hold as much relevance for healthcare staff working in prisons as in hospitals.

In summary, imprisonment represents an opportunity for reviewing, continuing, or improving therapeutic interventions in an otherwise transient and difficult to engage patient population. However, all too often it is experienced by prisoners as a disruption in care. This study has shown that continuity of psychiatric medicines supply is not assured on entry into prison. This is concerning in light of known high rates of self-harm and suicide in early custody. Given that most prisoners serve short sentences and that all but a few are returned to the community eventually, interest in the findings of this study should not just be limited to prison-based practitioners. Whilst responsibility for providing patient care might initially be assumed by prisons, this will usually be short lived, immediately ceasing on release. Community and prison-based prescribers must recognise their shared duty for
ensuring continuity of care if medicines supply for offenders with mental illness is to be maintained across setting boundaries.

Acknowledgements

We would like to express our sincere thanks to the prisons that participated in this study and gratefully acknowledge the healthcare staff that facilitated work at individual sites.
4.2 Paper 2

A cross-sectional study of psychotropic medication prescribing patterns in prisons

Hassan L, Senior J, Frisher M, Edge D & Shaw J.

Prepared for *Journal of Psychopharmacology* (not yet submitted)
Abstract

Mental illness is significantly more common in prisons than in the community. However, research suggests mentally ill prisoners experience problems with access to psychotropic medicines. This study aimed to determine the prevalence and patterns of psychotropic medication prescribing in prisons, and to compare these with the local community. Four East of England prisons, housing 2,222 men and 341 women were recruited to the study. On census days, clinical records were used to identify and collect data on all prisoners with current, valid prescriptions for hypnotic, anxiolytic, antipsychotic, antidepressant and/or stimulant medication, as listed in chapters 4.1 to 4.4 of the BNF. Data on 280,168 patients from the local community were obtained for comparison purposes from the General Practice Research Database. Overall, psychotropic medications were prescribed to 20% of men and 44% of women prisoners. After adjusting for age, rates of prescribing in prison were 5.5 and 5.9 times higher than in community-based men and women, respectively. There was no recorded, valid clinical indication for 47% of psychotropics prescribed in prison. These findings confirm high use of psychotropic medicines in prison and caution prison prescribers against inappropriate prescribing and/or poor record keeping.

Keywords: prison, medication, psychopharmacology, offenders, psychiatry

Introduction

The prevalence of mental illness is significantly higher in prisons than in the general population. A systematic review of 62 prison surveys in western countries estimated that 4% of men and women in prison had psychosis, while 10% of men and 12% of women had major depression. After accounting for age differences, this indicated a two to four-fold excess of psychotic disorders and major depression in prisoners compared with community populations (Fazel & Danesh, 2002). Thus, high rates of psychotropic medicine prescribing in prisons are to be expected. Internationally, several studies have shown that prescriptions for psychotropic medicines are elevated in incarcerated populations, especially among women (Baillargeon et al., 2001; Baillargeon & Contreras, 2001; Elger et al., 2002; Harcouët, 2010; Kjelsberg & Hartvig, 2005a; Singleton et al., 1998); however, just two studies included a formal community comparison group (Elger et al., 2002; Kjelsberg & Hartvig, 2005b) and
none adequately accounted for age and gender differences between populations, making direct comparisons of prescribing rates problematic.

Currently, there is a lack of robust information regarding prescribing patterns in UK prisons (Department of Health, 2003b). A large-scale Office for National Statistics survey of psychiatric morbidity in prison found that a fifth of men and half of women received some form of psychotropic medication or medication for substance dependence (Singleton et al., 1998). However, this research was conducted almost fifteen years ago; during this time the prison population has significantly increased, budgetary and commissioning responsibility for prison healthcare has transferred to the NHS and numerous new psychotropic drugs have entered the market. More recently, questions have been raised regarding the equity, continuity and appropriateness of prescribing for mentally ill prisoners. For example, Hassan et al. (2011b) found evidence of discontinuity of medicines supply between the community and prison. During the week following entry into custody, half of all psychotropic medicines prescribed in the community were not continued in prison, often without evidence of clinical review, provision of substitute medication or other recorded justification. Furthermore, in qualitative studies patients have commonly reported difficulties in accessing prescribed psychotropic medications in prison, causing significant frustration and distress (Bowen et al., 2009; Plugge et al., 2008). Conversely, others have raised concerns that psychotropic medicines may be inappropriately over-prescribed in custody, illicitly traded or sought for their euphoric, anxiolytic or sedative, rather than therapeutic, effects (HM Inspectorate of Prisons, 2007; RCGP, 2011).

In the UK the number of people in prison with mental illness is higher than ever, and likely to increase (Bradley, 2009); therefore, continuing high rates of psychotropic prescribing in prisons are inevitable. High quality, robust prescribing data are not routinely available from prisons, yet these are essential to managing the overall clinical, cost effective, and safe use of psychotropic medicines. In order to fill this knowledge gap, we conducted a study to determine prevalence and patterns of psychotropic medication prescribing in prisons, and to make robust comparisons with the wider community.
Methods

A cross-sectional, epidemiological survey was used to measure the prevalence of psychotropic prescribing among adult prisoners in the East of England, compared with a sample of community GP-registered patients from the General Practice Research Database (GPRD). The study was approved by the Northern and Yorkshire Research Ethics Committee (Ref: 09/H0903/54), the National Offender Management Service, the GPRD’s Independent Scientific Advisory Committee and the NHS and private sector management bodies responsible for healthcare at each prison.

Sample

Four prisons in the East of England in 2010 were recruited to the study. Sites were selected to represent a range of prisoner populations, including adults, young offenders (18-21 years), men, women, unconvicted and convicted prisoners (Table 1). A census day was selected at each prison. Dates were dependent on access arrangements and thus varied between sites (18th August 2010 to 14th April 2011). All prisoners aged 18 years and over and in custody at participating prisons on census days were included in the survey, yielding a final sample of 2,222 men and 341 women. Individuals aged less than 18 years were excluded as prescribing guidelines differ for children and young people.

For comparison purposes, we obtained data on a sample of community patients from the GPRD, a UK wide dataset collecting data on more than five million patients seen at over 625 primary care practices, covering approximately 8% of the population (General Practice Research Database, 2011). All GPRD patients who were a) alive, b) aged 18 years or over and c) registered with a GP in the East of England throughout 1st February and 30th July 2010 were included in the study, yielding a final sample of 138,803 men and 141,365 women. Previous population comparisons have indicated that GPRD patients are representative of the general UK population with respect to age and sex (Office for National Statistics, 2000).

Procedure

On census days at participating prisons, prison healthcare staff used electronic clinical database management systems or clinical records (if prescribing was done manually) to
identify all patients with a current, valid prescription for at least one psychotropic medication. For the purposes of this study, psychotropic medication was defined as any medication listed in chapters 4.1-4.4 of the British National Formulary (BNF, 2010), which covers hypnotic and anxiolytic (4.1), antipsychotic (4.2), antidepressant (4.3) and stimulant (4.4) medications. For each patient in receipt of prescribed psychotropic medication, prison healthcare staff extracted data from individual clinical records, including: demographic data (gender, legal status, ethnicity and year of birth); physical and mental health diagnoses; and psychotropic medication prescription details (drug name, dose, frequency, route of administration, indication and date of first prescription in custody). These data were anonymous. Population counts on the census day, stratified by age, were also provided by each prison for use as denominators when calculating prevalence rates.

GPRD supplied equivalent, anonymised patient-level data for all community-based patients that met the inclusion criteria and were prescribed at least one prescribed psychotropic medication between 1st February and 30th July 2010. Data were provided as a series of tables, linked by an anonymous patient identifier, which were imported into a Microsoft Access relational database. We then selected all individuals in receipt of prescribed psychotropic medication on our chosen census date, 30th July 2010. Aggregate population data, complete with age and gender breakdowns, were obtained for use as denominators.

Data analysis
The principal outcome measure was the point prevalence rate (percentage and 95% confidence intervals) of psychotropic prescribing among prisoners. Prescribing rates were calculated for each prison and GP registered community patients, stratified by BNF chapter and gender. Prevalence rate ratios (PRRs) were also generated to compare prescribing rates between prisons and the community. Where indicated, prescribing rates were indirectly standardised, using the community sample as the reference group, to account for differences in age distribution between prison and community samples. Statistical analyses were performed using Stata version 10 software for Windows (StataCorp, 2008).

All psychotropic medicines prescribed in prison were compared with recorded diagnoses for individuals and individually categorised using the BNF as: indicated (the indication for the drug was recorded and upheld in the BNF, including licensed and unlicensed uses); not
indicated (the indication for the drug was recorded but not upheld in the BNF); and no diagnosis (no indication was recorded for the drug).

Results

Table 2 describes point prevalence prescribing rates for psychotropics in prison by medication type. Overall, psychotropic medications were prescribed to 20% (CI 18-21) of men and 44% (CI 39-49) of women in prison; a ratio of 2.3 (CI 1.9-2.6). Among prisoners prescribed psychotropic medications, 67% (n=393) were prescribed a single psychotropic medication, 26% (n=151) were prescribed two medications and 7% (n=40) were prescribed three or more medications. Antidepressants were the most commonly prescribed type of psychotropic medication, prescribed to 14% of men and 33% of women. When compared with the community, prescriptions for hypnotics and anxiolytics were particularly elevated in prisoner populations (Table 2).

After adjustment for age, rates of prescribing in prison were 5.5 times higher among men and 5.9 times higher among women than in community populations. Women in prison were at least 12 times more likely than women in the community to be prescribed antipsychotic medications. Rates of psychotropic prescribing also varied by prison type (Table 3). Lower rates of psychotropic prescribing were observed in the training prison for sentenced male prisoners (Prison B) than in male local prisons which served the courts (RR 0.6 CI 0.5-0.7); in particular, there was reduced prescribing of hypnotic and anxiolytic medications.

The most frequently prescribed hypnotic/anxiolytic drug in prison was diazepam, which accounted for half of prescriptions in this category (Table 4). Rates of promethazine and diphenhydramine prescribing were higher in prison than in the community (RR 11.3 CI 7.7-16.7; RR 38.9 CI 14.6-103.4). Temazepam accounted for 18% (n=1116) of hypnotic and anxiolytic prescriptions in the community, but was not prescribed at all in prison. The commonest antipsychotics prescribed in prison were olanzapine and quetiapine; these were also commonly prescribed in the community. Mirtazapine was the most frequently prescribed antidepressant in prison (31%), but accounted for just 5% of community antidepressant prescriptions. Prisoners prescribed an antidepressant were six times as likely to receive mirtazapine as patients prescribed an antidepressant in the community (RR 5.9 CI 5.1-6.8), but less likely to receive a tricyclic antidepressant (RR 0.6 CI 0.5-0.8). There
were just two instances of CNS stimulant prescribing in prison (both methylphenidate, which is commonly prescribed for Attention Deficit Hyperactivity Disorder).

We examined indications recorded in clinical records for individual medications prescribed in prisons (Table 5). Overall, 53% of prison prescriptions were accompanied by an indication upheld in the BNF. Prescriptions for antipsychotics were less likely to be supported by a valid indication than other types of medication (RR 0.6 CI 0.5-0.7). Only 41% of antipsychotics prescribed to male prisoners were accompanied by a valid indication, compared with 10% of women (RR 4.1 CI 1.6-10.7). A further 7% of medicines were prescribed for non-indicated conditions. Non-indicated diagnoses associated with antipsychotic prescriptions included depression (n=9), personality disorder (n=7) and paranoia (n=4). Non-indicated diagnoses associated with antidepressant prescriptions included anxiety (n=8), personality disorder (n=4) and insomnia (n=5). In 40% of cases, there was no indication recorded at all for the drug.

**Discussion**

This study confirms a high prevalence of psychotropic prescribing in prisons. A fifth of men and almost half of women were prescribed at least one psychotropic drug in prison, with antidepressants as the most commonly prescribed type of medication. Overall, after adjusting for age differences, women and men in prison were at least five times more likely than community populations to be prescribed psychotropic medication.

*Comparing the prevalence of mental illness with prescribing in prisons*

Our findings are consistent with previous studies, which have reported higher rates of both mental illness (Fazel & Danesh, 2002; Singleton *et al.*, 1998) and prescribing for psychotropic medications in prisons (Baillargeon *et al.*, 2001; Baillargeon & Contreras, 2001; Elger *et al.*, 2002; Fazel & Danesh, 2002; Harcouët, 2010; Kjelsberg & Hartvig, 2005a; Singleton *et al.*, 1998). It has been suggested that psychotropic prescribing rates reflect the prevalence of psychiatric morbidity in prison (Kjelsberg & Hartvig, 2005a). After accounting for age differences, Fazel and Danesh (2002) estimated a two to four-fold increase in psychosis and major depression in prison populations compared with the community. In comparison, the age-adjusted prescribing ratios generated in our study appear to be higher for antidepressants and, particularly, antipsychotics. This could, potentially, suggest an excess
of psychotropic prescribing in prisons. However, there are additional complexities to consider. Research has consistently shown that the vast majority of mental illness goes undetected and untreated in prison (Birmingham et al., 1996; Shaw et al., 2009c). Thus, it is likely that a proportion of psychotropic medicines may have been prescribed to individuals without a mental illness.

Clinically indicated prescribing

The presence of a valid indication, recorded in the clinical record, is regarded as a key criterion of appropriate prescribing (Cantrill, 2000; Hanlon et al., 1992). When comparing rates of psychotropic prescribing with the prevalence of mental illness, one factor to consider is that individual drugs may be prescribed for multiple clinical indications. For example, certain antidepressants, such as paroxetine and escitalopram, are recommended in the treatment of generalised anxiety disorder, in addition to major depression (BNF, 2010). Additionally psychotropic medications have, over time, been prescribed to treat conditions other than mental illness ‘off label’ (unlicensed); in many cases, this may be relatively uncontroversial and not necessarily represent a risk to patient safety (Baldwin & Kosky, 2007). For example, the antidepressant amitriptyline is commonly used to treat neuropathic pain, in line with the BNF (2010). Thus, it could be argued that what may appear to be an excess of psychotropic prescribing in prisons beyond the prevalence of mental illness may, if clinically indicated, still be appropriate.

In the current study, however, almost half of psychotropic medications prescribed in prison were not accompanied by an indication upheld in the BNF. Prescribing outside of such parameters may not necessarily be inappropriate, provided that a recorded justification is provided (Tully & Cantrill, 2006). However, in 40% of cases in this study, no indication at all was recorded.

Differences in individual drugs

We found that the particular psychotropic drugs prescribed in prison differed from those used in community settings. Short-acting benzodiazepines (e.g. temazepam), though commonly prescribed in the community, are discouraged in prison due to their dependence and misuse potential (RCGP, 2011). Dependence on benzodiazepines (both illicit and prescribed) is common among prisoners entering custody and English prisons operate a policy of routine benzodiazepine detoxification on entry to custody (Department of Health,
The BNF recommends patients are transferred to equivalent doses of diazepam, a longer-acting anxiolytic, as a precursor to such treatment (BNF, 2010). This could explain why diazepam accounted for half of all prescriptions for hypnotics and anxiolytics in prison and there were no instances of temazepam prescribing. It might also explain why rates of hypnotic and anxiolytic prescribing were lower in the prison for sentenced men, as such establishments do not usually accept prisoners currently undergoing detoxification.

Patients prescribed antidepressants were less likely to be prescribed tricyclic antidepressants than community-based patients. Tricyclic antidepressants have similar efficacy to other classes of antidepressant drugs, but are more dangerous in overdose (BNF, 2010). Given the high rates of suicide and self-harm among prisoners (Fazel et al., 2005b), this may explain reduced use in prisons and could be regarded as a positive finding.

There was also a significant preference for mirtazapine, a noradrenergic and specific serotonergic antidepressant, in prison compared with the community. Sedation and weight gain are relatively common, but tolerable side effects among patients who take the drug (National Collaborating Centre for Mental Health, 2010). Anecdotal evidence suggests that in a prison setting, where sleep problems are common (Elger, 2007), sedative side effects may be viewed as desirable and therapeutically beneficial; unfortunately the hypnotic effects of mirtazapine also increase its value and potential for diversion among prisoners without mental illness (Lange, 2008; RCGP, 2011). Recent guidance issued on safer prescribing in prisons (RCGP, 2011) has reiterated that mirtazapine should not be prescribed as a sleeping tablet and should be prescribed second or third line for major depression only, in line with NICE guidance (National Institute of Health and Clinical Excellence, 2009a). Nonetheless, such factors may have contributed towards the increased frequency of mirtazapine prescriptions in prisons observed in this study.

Strengths and limitations

Previously, relatively few studies internationally (Baillargeon et al., 2001; Baillargeon & Contreras, 2001; Elger et al., 2002; Harcouët, 2010; Kjelsberg & Hartvig, 2005a), and just one UK study (Singleton et al., 1998), now over a decade old, have described rates of psychotropic prescribing in prisons. Furthermore, few have included a large, robust community comparison group or considered whether medications were prescribed...
according to their accepted clinical indications. Despite these strengths, our study was not without limitations. Indications recorded in clinical records were checked against those listed in the BNF. It is possible that patients may have derived benefit from certain medicine for indications not listed in the BNF. However, under the circumstances, this represented the most comprehensive and systematic approach for research purposes. Data were obtained from patient clinical records. Whilst these represent the only available source of routine data linking patient-level clinical information with prescribing (Cantrill et al., 1998), medical records are imperfect tools, often poorly maintained and afforded low priority (Pullen & Loudon, 2006). In prison especially, mentally ill patients commonly accumulate extensive clinical records (e.g. large volumes of detailed daily nursing notes), meaning important information can be diluted; thus it is possible that in this study relevant indications or diagnoses were missed, potentially underestimating appropriate prescribing. Also, in keeping with our focus on prisons, we did not analyse GPRD data on appropriateness and therefore cannot compare prescribing appropriateness in prison with community norms. For ethical reasons, patient data were accessed and collected by members of each prison’s healthcare team. Staff received written, standardised instructions and access to additional support from the research team where required. However, we did not collect data on inter-rater reliability, meaning we were unable to evaluate the influence of multiple data collectors within and between prisons. The cross-sectional, census design used eliminated non-response bias, but may have resulted in underrepresentation of prisoners with shorter sentences. All patients (prison and community) were located in the East of England and thus care should be taken when generalising findings elsewhere; although there are no reasons to believe that prison populations or prescribing arrangements are substantially different in this regions to others in the UK.

**Implications**

Assessing the appropriateness of prescribing is difficult (Barber, 1995), arguably even more so in the field of psychiatry, where the use of pharmacological treatment remains controversial (Cowen, 2011). The findings of this study indicate elements of good practice in prisons which should not be overlooked, notably reduced prescribing of tricyclic antidepressants and certain addictive benzodiazepines, including temazepam. Nonetheless, other findings are arguably concerning and warrant attention to improve prescribing appropriateness.
This study confirms high rates of psychotropic prescribing in prisons. Prescriptions were often unaccompanied by a valid indication in patient clinical records. We acknowledge that doctors and healthcare staff in prisons work in especially challenging environments, with a complex group of patients. High levels of distress, comorbidity and distrust among prisoners all contribute to the difficulty of effectively identifying, assessing and treating mental illness. However, in this environment we would argue it is even more important to keep comprehensive, unambiguous clinical records with clear justification of prescribing decisions. Further work is necessary to confirm whether our findings reflect poor record keeping and/or inappropriate prescribing, and to explore avenues for improvement.

There is some indication that psychotropic prescribing rates in prison were in excess of the expected prevalence of mental illness. Others have suggested that reliance on psychotropic medicines in prisons may be exacerbated by insufficient access to alternative, non-pharmacological ‘talking’ treatments (HM Inspectorate of Prisons, 2007). This may be a question of resources; in a setting where population needs outweigh healthcare resources, psychotropic medication may be viewed as a relatively affordable and feasible means of treatment that is acceptable to patients. However, there is a danger that inappropriate prescribing could redirect valuable resources away from those most in need. Despite improvements to prison mental healthcare services, research has shown that the majority of mental illness continues to go undetected and untreated; at present only a quarter of prisoners with severe mental illness are assessed by secondary care mental health services within their first month in custody (Shaw et al., 2009c). This under-identification, coupled with the issues around prescribing highlighted in this paper, confirms that prison mental healthcare services have some distance yet to travel.

Conclusions

Prisoners represent a small proportion of the population, but their burden of mental health need is disproportionately high. In this study, rates of psychotropic prescribing in East of England prisons were at least five times higher than in the community. However, prescriptions were not always adequately justified in patient clinical records. Further work is necessary to conclude whether the study findings reflect inappropriate prescribing and/or poor record keeping. Robust data on the prevalence, origin and appropriateness of
psychotropic prescribing on a national scale, are essential for effective medicines management in prisons.

Acknowledgements

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Funding

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Table 1: Sample characteristics, by age and sex

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<th>Age group, % (n)</th>
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<th></th>
<th></th>
<th></th>
<th></th>
<th>Total</th>
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<tr>
<td></td>
<td>18-24</td>
<td>25-34</td>
<td>35-44</td>
<td>45-54</td>
<td>55-64</td>
<td>65-74</td>
<td>75 +</td>
<td></td>
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<tr>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prison A - Adult and young men, local</td>
<td>32 (148)</td>
<td>36 (163)</td>
<td>21 (94)</td>
<td>8 (35)</td>
<td>2 (10)</td>
<td>1 (5)</td>
<td>0 (2)</td>
<td>100 (457)</td>
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<td>Prison B - Adult and young men, training</td>
<td>39 (414)</td>
<td>17 (185)</td>
<td>19 (202)</td>
<td>14 (145)</td>
<td>7 (72)</td>
<td>4 (43)</td>
<td>1 (11)</td>
<td>100 (1072)</td>
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<tr>
<td>Prison C - Adult and young men, local</td>
<td>29 (198)</td>
<td>33 (232)</td>
<td>21 (146)</td>
<td>11 (73)</td>
<td>3 (23)</td>
<td>2 (13)</td>
<td>1 (8)</td>
<td>100 (693)</td>
</tr>
<tr>
<td>Prison D - Women</td>
<td>28 (94)</td>
<td>33 (114)</td>
<td>2 (845)</td>
<td>11 (39)</td>
<td>3 (10)</td>
<td>0 (0)</td>
<td>0 (0)</td>
<td>100 (341)</td>
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<td>Community</td>
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<td></td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td>Men</td>
<td>10 (13,760)</td>
<td>16 (22,126)</td>
<td>20 (27,315)</td>
<td>19 (26,574)</td>
<td>16 (21,716)</td>
<td>11 (15,019)</td>
<td>9 (12,293)</td>
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<td>16 (22,508)</td>
<td>18 (25,918)</td>
<td>18 (24,995)</td>
<td>15 (21,559)</td>
<td>11 (15,884)</td>
<td>12 (17,589)</td>
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Table 2: Crude and age-adjusted comparisons of prison and community psychotropic point prevalence prescribing rates, by gender and BNF chapter

<table>
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<tr>
<th>BNF chapter</th>
<th>Community (ref. group)</th>
<th>Prisoners</th>
<th>PRR (95% CI)</th>
<th>Crude</th>
<th>Age-adjusted</th>
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<tr>
<td></td>
<td>N</td>
<td>%</td>
<td>95% CI</td>
<td>N</td>
<td>%</td>
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<tr>
<td>Men</td>
<td></td>
<td></td>
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<tr>
<td>Hypnotics and anxiolytics</td>
<td>1,545</td>
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<td>1.1-1.2</td>
<td>142</td>
<td>6.4</td>
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<td>1.0</td>
<td>1.0-1.1</td>
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<td>Antidepressants</td>
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<td>4.1</td>
<td>4.0-4.3</td>
<td>306</td>
<td>13.8</td>
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<td>CNS stimulants</td>
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<td>0.04-0.06</td>
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<td>0.1</td>
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<tr>
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<td>5.4</td>
<td>5.3-5.5</td>
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<td>Women</td>
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<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Hypnotics and anxiolytics</td>
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<td>2.2</td>
<td>2.1-2.2</td>
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<td>10.6</td>
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<td>1.4</td>
<td>1.4-1.5</td>
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<td>9.1-9.4</td>
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<td>0.03-0.05</td>
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<tr>
<td>Any</td>
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<td>11.1</td>
<td>11.0-11.3</td>
<td>150</td>
<td>44.0</td>
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PRR; Prevalence Rate Ratio
### Table 3: Psychotropic point prevalence prescribing rates in prison, by site and BNF chapter

<table>
<thead>
<tr>
<th>BNF chapter</th>
<th>Prison A N</th>
<th>Prison A %</th>
<th>Prison B N</th>
<th>Prison B %</th>
<th>Prison C N</th>
<th>Prison C %</th>
<th>Prison D N</th>
<th>Prison D %</th>
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<tbody>
<tr>
<td>Hypnotics and anxiolytics</td>
<td>47</td>
<td>10.3</td>
<td>13</td>
<td>1.2</td>
<td>82</td>
<td>11.8</td>
<td>36</td>
<td>10.6</td>
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<tr>
<td>Antipsychotics</td>
<td>17</td>
<td>3.7</td>
<td>55</td>
<td>5.1</td>
<td>55</td>
<td>8.2</td>
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</tr>
<tr>
<td>Antidepressants</td>
<td>55</td>
<td>12.0</td>
<td>123</td>
<td>11.5</td>
<td>128</td>
<td>18.5</td>
<td>114</td>
<td>33.4</td>
</tr>
<tr>
<td>CNS stimulants</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>0.3</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Any</td>
<td>97</td>
<td>21.2</td>
<td>157</td>
<td>14.6</td>
<td>181</td>
<td>26.1</td>
<td>150</td>
<td>44.0</td>
</tr>
</tbody>
</table>

### Table 4: Distribution of leading psychotropic medications in prison (descending order), as compared with the community, by BNF chapter and drug

<table>
<thead>
<tr>
<th>Rank (Prison)</th>
<th>Drug</th>
<th>Hypnotics and anxiolytics, % (n)</th>
<th>Antipsychotics, % (n)</th>
<th>Antidepressants, % (n)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Drug</td>
<td>Prison</td>
<td>Community</td>
<td>Prison</td>
</tr>
<tr>
<td>1</td>
<td>Diazepam</td>
<td>51 (105)</td>
<td>20 (1233)</td>
<td>27 (48)</td>
</tr>
<tr>
<td>2</td>
<td>Zopiclone</td>
<td>21 (42)</td>
<td>33 (2054)</td>
<td>23 (42)</td>
</tr>
<tr>
<td>3</td>
<td>Promethazine</td>
<td>15 (31)</td>
<td>1 (83)</td>
<td>14 (26)</td>
</tr>
<tr>
<td>4</td>
<td>Chlordiazepoxide</td>
<td>6 (13)</td>
<td>1 (86)</td>
<td>9 (17)</td>
</tr>
<tr>
<td>5</td>
<td>Diphenhydramine</td>
<td>4 (9)</td>
<td>0 (7)</td>
<td>5 (9)</td>
</tr>
<tr>
<td>All</td>
<td></td>
<td>100 (203)</td>
<td>100 (6143)</td>
<td>100 (180)</td>
</tr>
</tbody>
</table>
Table 5: Proportion of prison prescriptions for psychotropic medications accompanied by a valid indication

<table>
<thead>
<tr>
<th>BNF chapter</th>
<th>Valid indications (licensed and unlicensed), as listed in the BNF(^\text{16})</th>
<th>Indicated</th>
<th>Not indicated</th>
<th>No diagnosis</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>N</td>
<td>%</td>
<td>N</td>
<td>%</td>
</tr>
<tr>
<td>Hypnotics and anxiolytics</td>
<td>Anxiety, insomnia, alcohol dependence, benzodiazepine dependence and allergies.</td>
<td>122</td>
<td>60</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>Antipsychotics</td>
<td>Schizophrenia, psychosis, bipolar disorder, epilepsy, severe aggression or agitation.</td>
<td>62</td>
<td>34</td>
<td>27</td>
<td>15</td>
</tr>
<tr>
<td>Antidepressants</td>
<td>Depression, anxiety, bipolar disorder, obsessive compulsive disorder and post traumatic stress disorder.</td>
<td>253</td>
<td>58</td>
<td>28</td>
<td>6</td>
</tr>
<tr>
<td>All</td>
<td></td>
<td>437</td>
<td>53</td>
<td>60</td>
<td>7</td>
</tr>
</tbody>
</table>

\(^{16}\)NB not all indications are valid for all drugs in each BNF chapter.
5. Methods: Part 2

This chapter describes and discusses the theoretical framework, methods, procedures and rationale for study three, which comprised the qualitative arm of this mixed methods study (see section 3.1.2 for an overview of all three studies).

5.1 Aims and research questions

Whilst the prescription of medication is central to modern mental healthcare, reliable data on psychotropic prescribing in prisons are scarce. Her Majesty’s Inspectorate of Prisons recently suggested psychotropic medicines were overused in prisons and required enhanced monitoring (HM Inspectorate of Prisons, 2007). Furthermore, in qualitative studies, prisoners with mental illness have reported problems in accessing psychotropic medicines in prisons, raising questions about equity of care (Bowen et al., 2009; Condon et al., 2007; Douglas et al., 2009).

One issue is that there have been longstanding concerns regarding the misuse and trading of psychotropic medicines in prisons, and the associated safety and security concerns (Hassan et al., 2012). Recent guidance from the Royal College of General Practitioners has reiterated that prescribers in prisons need to balance security and safety risks against individual health needs (RCGP, 2011). Yet, whilst remaining mindful of the risks, prescribers who care for mentally ill prisoners have to work within the policy context of equivalence of care. In these respects, psychotropic prescribing in prison is a particularly controversial and challenging area, with tensions between policy and practice.

The purpose of study three was to undertake a qualitative study in order to explore the perspectives of patients and healthcare staff regarding the use of prescribed psychotropic medication in prison settings. Two specific research questions were identified, designed to complement studies one and two (the quantitative arm of the work):

- Research question three - What do prisoners and healthcare staff perceive to be the purpose of psychotropic prescribing in prisons?
• Research question four - How do prisoners and healthcare staff account for apparent differences in access to psychotropic medicines between prisons and communities?

In order to answer these two different research questions effectively, I adopted a dually focused approach incorporating elements of thematic and discourse analysis. My commitment to social constructionism provided a common theoretical framework for the qualitative work. Over the course of this chapter, I will detail how this approach worked and justify my rationale.

5.2 Social constructionism

This thesis is informed by a pragmatic approach, flexible enough to accommodate whatever methods are necessary to answer the research questions. With this in mind, I decided to anchor the qualitative component of the study within a social constructionist epistemology, providing a common and coherent framework to unite the work and inform methodological choices. Social constructionism has been defined as (Crotty, 1998 p.42):

“The view that all knowledge, and all meaningful reality as such, is contingent upon human practices, being constructed in and out of interaction between human beings and their world, and developed and transmitted within an essentially social context.”

Inherent in social constructionism are a number of assumptions, which have implications for this study. Principally, irrespective of the true nature of reality (if there even is a ‘true’ reality), social constructionism proposes that we construct meaning through engaging with the world (Berger & Luckmann, 1966). Meaning does not reside in objects, but in the minds of individuals; in other words, objects are made, not found (Fish, 1980). Thus, it follows that the meanings individuals ascribe to objects and concepts are inevitably varied and pluralistic. Different people develop different meanings towards certain things. The social aspect of social constructionism refers to the way in which groups of people communicate, negotiate and co-construct these meanings in social interaction (Berger & Luckmann, 1966). Meanings may be formed through interaction with others, primarily through language, shaped by the particular social, historical, political and/or cultural contexts in which individuals and groups are situated. Furthermore, particular constructions of the world are bound up with power relations, with implications for what particular people can do under different circumstances (Burr, 2003).
In the context of the current study, I could see how an approach rooted in social constructionism could provide a solid foundation for the qualitative work. From a purely positivistic biomedical perspective, medicines could simply be viewed as physical objects or chemical compounds with the same function and effects, inside or outside of prison. However, from a social constructionist perspective, the concepts of ‘medicine’ and ‘illness’ are neither objective, nor fixed; rather, they can be regarded as constantly evolving concepts, dependent on the particular context (Conrad & Barker, 2010). Thus, all ways of understanding the meaning of medicines could be regarded as historically, socially and culturally relative.

As a theoretical framework, social constructionism resonated with me for a number of reasons. The notion that the meanings attached to ‘medicines’ (a socially constructed concept) were not fixed and could change, held an appealing logic that could potentially explain how medicines could be viewed differently by different people in different contexts. Using this approach had the advantage that it would allow me to comment on the range of meanings ascribed to psychotropic medication by staff and patients, without necessarily commenting on which should be regarded as the ‘truth’. This was preferable to accepting a positivist outlook; where there would be more pressure to identify the correct view about medicines, which corresponded with an ‘objective’ reality. This also appealed to me personally as I was conscious of my dual role as a student and a professional researcher employed with the Offender Health Research Network; therefore, I wanted to avoid ‘taking sides’ or to be seen to be pursuing any personal political motives. Rather, social constructionism could give me the freedom to adopt a critical stance and to question the divisions between concepts and seemingly natural divisions, for instance medicine and illicit drug. Furthermore, I could explore how particular constructions of the world held implications for the rights and responsibilities of different groups. Increasingly, I became interested in the particular role played by language within prescribing practices in prisons and thus my work took a ‘discursive turn’.

5.3 A discursive orientation

Language, while easy to take for granted, is central to our social worlds; indeed, it can be regarded as ‘the most basic and pervasive form of interaction between people’ (Potter & Wetherell, 1987 p.9). The fact that most social episodes are carried out symbolically, via
language, provides strong logic for a discursive approach to the understanding of the social world (Harré, 2003). In this section I will introduce the key concepts of discursive psychology and Foucauldian discourse analysis and discuss their relevance to my work. Discourse analysis refers to a broad area of studies with a common focus on the constructive and social properties of language in use, both spoken and written. Definitions of discourse are numerous, but broadly fall into three categories: (1) anything beyond the sentence; (2) any aspect of language use and (3) a broader range of social practice, including nonspecific and non-linguistic uses of language (Schiffrin et al., 2003). However at the most basic level, discourse can be regarded as language in use (Jaworski & Coupland, 1999). Therefore discourse analysis studies may range from analyses of language and meaning-making in specific situations through to critical analyses of much broader, historically and culturally developed linguistic practices.

From the perspective of discourse analysts, language is an inseparable part of, not a neutral reflection on, our realities. From a discursive perspective, concepts such as ‘medicine’ are not only socially constructed, but only derive meaning in language, relative to other words or concepts, such as vitamins, drugs or foods. To quote the semiologist de Saussure: “in language there are only differences” (De Saussure, 1972 p.118). Discourse analysis owes much to speech act theory, the seminal work of the linguistic philosopher Austin. Over the course of a series of Harvard lectures in 1955, subsequently published as How to Do Things With Words (Austin, 1962), Austin proposed that talk was not just descriptive, but performative: by speaking we do things, for example make promises, give orders, bet or even get married.

Over the course of the study, I became increasingly aware that decisions about the prescription, consumption and evaluation of medicines in prison were predominantly accomplished via interaction (during health screening or GP consultations, for example). Thus, it seemed natural for me to consider prescribing as a social practice, discursively constructed via a series of conversations and texts (including written medical records). It also occurred to me that, from my experiences of working in prisons and reading the literature in the area, the language of medicines and prescribing seemed to differ between patients and healthcare staff. For example, what patients considered a legitimate medicine (benzodiazepines, for example), could simultaneously be regarded by the prison as a harmful substance. I therefore decided it could be fruitful to use a version of discourse
analysis, rooted in social constructionism, to respond to research question four (section 2.6), and deconstruct prisoner and healthcare staff accounts regarding differences in access to psychotropic medicines in prisons and communities.

Although qualitative approaches have previously been used to explore the views of patients and staff regarding medication practices in prison (Bowen et al., 2009; Condon et al., 2007; Douglas et al., 2009; Plugge et al., 2008), these studies had adopted broad and thematic approaches focused on the impact of medication practices on prisoners. Furthermore, they appear to take an uncomplicated view of talk as a direct route to experiences and feelings; a practice which has been questioned by discourse analysts (Edwards & Potter, 1992; Potter, 1996; Potter & Hepburn, 2005a). By using discourse analysis, I wanted to build on these ‘macro-level’ studies by examining the detail of talk about prescribing. This way, it would be possible to compare how exactly patients and staff constructed and negotiated concepts like equivalence and mental illness, and the implications for access to medicines. Arguably, a discursive approach would also be better equipped to acknowledge contextual factors, recognising that inconsistencies in talk and interaction are not necessarily signs of dissonance or deceit, but can alternatively be considered strategic responses to changes in situational demands. Although there is body of discourse analysis research in psychiatry, much of this has been focused on diagnostic categories within mental illness, such as schizophrenia (Harper, 1999a; Meehan & MacLachlan, 2008; Rudge & Morse, 2001; Tucker, 2009). Fewer have focused specifically on the issue of medicines used to treat mental illness using a discursive approach (Harper, 1999b; Westwood, 2010). Thus, a discourse analysis approach had the potential to introduce a novel perspective on a familiar issue.

In terms of matters of conceptual coherence, Crotty (1998) asks whether, in engaging in research, we should faithfully link our proposed methodology and methods to one particular established thinker, philosopher or school of thought. Encouragingly, and not contrary to the spirit of pragmatism, Crotty concludes that, provided we have a proper grasp of what the original approach is about, “we need not be so purist” (Crotty, 1998 p.215). The particular discursive approach I used to answer my fourth research question combined insights from both discursive psychology and Foucauldian, or critical, discourse analysis. Whilst both discursive psychology and Foucauldian inspired approaches have a shared interest in the role of language in constructing social realities, they are considered distinct genres. I take the position, endorsed by several others (Harper, 1999b; Seymour-Smith et
that the two approaches can be combined to provide complementary perspectives, showing not only the rhetorical strategies used to produce accounts, but also the way wider discourses and subject positions can be drawn upon to exercise power.

In the first layer of analysis, I drew on the theory and methods of discursive psychology (Edwards & Potter, 1992; Potter, 1996; Potter & Wetherell, 1987). Dissatisfied with the dominance of traditional cognitive psychology and empiricist research and theory, Potter and Wetherell’s (1987) highly influential book *Discourse and Social Psychology: Beyond Attitudes and Behaviour* set a new agenda for social psychology with roots in established traditions such as semiology, linguistics and ethnomethodology. Over the last twenty five years, discursive psychology has become well-established field in its own right. Discursive psychology essentially, builds from three core concepts: construction, action orientation and situation (Potter & Hepburn, 2005a; Wiggins & Potter, 2008). Firstly, discourse is both constructed and constructive; far from being a neutral descriptor of our actions social and worlds, we use language to actively construct them. Secondly, discourse is action-oriented; discursive psychology is underpinned by the basic premise that “words are deeds” (Potter & Wetherell, 1987) and asserts that language is constructed in particular ways to achieve certain effects. The third and final principle is that discourse is situated and ‘occasioned’; the same utterance could mean different things said by different people in different situations. Therefore discourse is context-dependent and socially embedded within a specific sequential interaction, social setting and environment.

The second layer of analysis was influenced by the contemporary followers of the philosopher and historian Michel Foucault (1926-84) (Davies & Harré, 1990; Harré, 2003; Parker, 1994; Willig, 2008). From this perspective, discourse refers to the wider institutionally, historically and culturally embedded ‘discourses’ that are available within a culture and how they are used. For example, the use of words such as ‘symptoms’ and ‘diagnosis’ arguably privilege biomedical models of mental illness (Atkinson & Shute, 1999), which could be seen to indicate the use of medication. Notably, Foucault has drawn attention to the discourses and constructs of mental illness used in psychiatry, commenting that (Foucault, 1972 p.46):

> “Psychiatric discourse finds a way of limiting its domain, of defining what it is talking about, of giving it the status of an object – and therefore of making it manifest, nameable, and describable.”
More generally, Foucauldian discourse analysis is characterised by a critical stance, revealing the struggle and power play implicit in prevailing practices. Thus, discourse analysis from a Foucauldian stance is well placed to consider how power relations are established and challenged. Thus, in the context of this study, such an analysis could reveal how access to psychotropic medication is negotiated in prisons. In order to tackle the function of claimed knowledge, rather than engaging in a battle of truth, Foucault maintains that we should “question it as a discursive formation” (Foucault, 1972 p.205). Thus, the purpose becomes not to deliberate the truth of claims, to mental illness for example, but to consider the effects of these particular formulations.

From a Foucauldian perspective, societal-level discourses help to construct both objects and an array of ‘subject positions’ (Parker, 1994). Subject positions (for example, patient, prisoner or father) can be used to construct identities (Davies & Harré, 1990). According to Harré, in adopting a subject position we momentarily assume “a certain cluster of rights, duties, and obligations with respect to what sorts of things a certain person, in that position, can say and do” (Harré, 2003 p.697). Thus, discourses offer ways of seeing and being (Willig, 2008). In turn, these control what can be said and done and are closely implicated in how power is exercised (Willig, 2008). It is important to emphasise that subject positions are discursive accomplishments and are, by nature, ephemeral; they can be revised, challenged, exploited or discarded during the course of social interaction (Harré, 2003). Furthermore, we can occupy multiple subject positions simultaneously. For the purposes of the current study, I sought to identify how particular subject positions were constructed, renegotiated or discredited as part of accounts and the implications for access to psychotropic medication in prison.

In summary, whilst discursive psychology is concerned with how speakers use language as a tool for accomplishing social objectives during interactions, Foucauldian-influenced discourse analysis is more concerned with the role of discourses within a culture and how these are implicated in social processes, such as the exercise of power (Willig, 2008). Practically speaking, discursive psychology and Foucauldian analyses operate at different levels, with the former typically involving fine-grained analysis of conversational texts and the latter opting for a more macro-level focus (Rogers, 2003; Willig, 2003). Thus, using a two-sided discursive psychological/Foucauldian approach enabled me to examine the detail of how accounts were structured, whilst acknowledging the wider implications for access to psychotropic medicines. From a practical perspective, I also had previous experience in
using discursive psychology (as part of an MPhil thesis) and felt comfortable with and confident in this choice of methodology.

5.4 The interview as method

In this study, qualitative interviews were used to explore patient and staff perspectives on the role of prescribed medication in treating mental health problems, influences on prescribing in prisons, and their experiences in accessing, or arranging access to, psychotropic medications in prisons.

Interviews are probably the most widely used method of data collection in qualitative research. Research interviews can be structured, semi-structured or open ended (Britten, 1995). Structured interviews can be regarded as ‘verbal questionnaires’ and are least common in qualitative research; questions are predetermined and are read to the interviewee in a fixed order. Often questions are closed in nature, requiring dichotomous (e.g. yes or no) answers or instructing the interviewee to choose from a set list of options. Conversely, open ended interviews are much less structured, covering one or two pre-identified topics in great detail, with questions flowing from what the interviewee says. Thus the type, order and wording of questions asked will vary from interview to interview. I chose to use semi-structured interviews. As the name implies, these lie somewhere in between structured and open ended interviews. Semi-structured interviews are based on a loose structure of pre-determined open ended questions, but there is sufficient flexibility to allow the topic of conversation to diverge in order to pursue an idea in more detail (Britten, 1995).

Broadly, there are four types of approaches to choose from in qualitative research: interviews, observations, documentation and artefacts (Sandelowski, 2002). Interviews have a number of advantages over other methods. Firstly, in comparison to observational methods, they can generate focused, detailed data on a specific topic of interest relatively quickly. There was no need to wait to observe spontaneous interactions about prescribing or medicine-taking; rather, I could choose the most relevant questions and put them to participants directly. Secondly, the interactive quality of interviews is particularly valuable as it enables the researcher to flexibly adapt their approach in situ. Thus, unlike methods such as observations or documentation (for example participant diaries, open-ended
questionnaires or policy analysis), I could query participant’s responses there and then, probing responses further to elicit greater detail. Thirdly, interviews can be used to ask about events which cannot be directly observed. Participants can provide historical information about their previous experiences relevant to the topic being studied; often this information would not be available in records or accessible even to the keenest observer. In the context of the current study, interviews allowed patients to tell me about their experiences of treatment for mental illness inside and outside of prison that I could not have observed myself.

The semi-structured format of interviews enabled me to flexibly adapt my interview style and vocabulary to effectively engage with the diverse range of individuals I would meet, whilst addressing a common set of topics in each interview. Had I posed standardised written or verbal questions, this would have been considerably more difficult to convey meaning to people with different vocabularies, command of the English language and levels of literacy. Furthermore, it allowed both me and participants to deviate from the questions and subjects identified *a priori* and introduce novel topics of discussion, which had not previously been considered. Unstructured interviews were not perceived to be a practical option. Research involving prisoner-patients has to be ethically reviewed. One of the purposes of this is to ensure interview content is appropriate and suitably sensitive for participants, which may have been difficult to demonstrate without a pre-prepared topic guide or schedule. Focus groups were also considered as they offered many of the advantages of semi-structured interviews; yet, by interviewing several individuals simultaneously, would have been even quicker and more efficient, with opportunities for participants to interact with each other as well as the researcher. However, conducting one-to-one interviews enabled me to elicit patient perspectives individually and privately; I felt this was more suitable because I could guarantee confidentiality, which was important considering the potentially sensitive nature of discussing personal experiences of mental illness and imprisonment.

Although interviews are widely thought of as the gold standard in qualitative research (Silverman, 2005), no method is without its limitations. In particular, interviews may be relatively quick and easy to arrange but, arguably, are difficult to do well; the researcher becomes the research instrument. Common pitfalls include dealing with outside interruptions, competing distractions, maintaining control, receiving secret information (e.g.
violent intentions), asking awkward or sensitive questions, and avoiding the temptation to
counsel interviewees (Field & Morse, 1989). Many of these points are especially pertinent
to interviewing patients in prisons, where patients are considered particularly vulnerable
and questions and responses about mental illness need to be handled sensitively. Although
it may be tempting to consider interviewing as an ‘art’, interviewers are commonly
encouraged to improve their skills, suggesting that good interview technique can be learned
(Seidman, 2005). However, it seems there is no recipe for a good interview. For example,
the advice to avoid being overly directive (e.g. asking leading questions) is common: as
Seidman advises, interviewers should “listen more, talk less” (Seidman, 2005 p.78).
Nonetheless, interviewers are, simultaneously, encouraged to maintain control during
interviews (Seidman, 2005). Thus, it seems that non-directiveness is not necessarily best. In
the end, Britten opts for the advice that, “the amount of directiveness should be
appropriate” (Britten, 1995 p.251). Whilst diplomatic, this is arguably not terribly practical
advice for the novice interviewer. More helpfully, Britten directs readers towards Whyte
(1982), who identifies six levels of directiveness ranging from making encouraging noises
(least directive) to introducing a new topic (most directive). Nonetheless, as dilemmas such
as this show, there appear to be no hard and fast rules when interviewing, except perhaps
that it takes practice and skill to get it right (also see Box 5, page 131 for an account of a
‘failed’ interview).

A further challenge comes from a growing body of work that has begun to topicalise the
research interview itself (Atkinson & Silverman, 1997; Potter & Hepburn, 2005b;
Sandelowski, 2002). Silverman (2005) argues that while interview data can be treated as a
direct route to authentic experiences and perspectives outside of the research interview, it
can also be seen as a narrative, actively and jointly constructed in a two-way process by
interviewer and interviewee. Before choosing to use interviews, I carefully considered my
options. Qualitative interviews - whilst popular, efficient and rich sources of data - could be
seen as ‘artificial’ situations which generate accounts of how individuals perceive
phenomena, as told to an outsider (me). This might not necessarily provide an accurate
reflection on how individuals act in situ. Could I use alternative, more ‘naturalistic’ methods
to investigate prescribing in prisons?

Considering the alternatives, doctor-patient consultations immediately struck me as one
potential method of gathering observational data. However, after discussing this with
colleagues and prison healthcare staff, I had to rule this out as unfeasible in this case due to ethical and practical reasons. Gaining access to conduct research in prisons is a complicated and time-consuming process, requiring several sets of ethical and management approvals (Hayes et al., 2010). The dual status of the participants in this project as prisoners and people with mental health problems made participants doubly vulnerable and introduced additional complexities with respect to ensuring participants had capacity to consent, gaining informed consent and guaranteeing voluntary participation. Furthermore, even if I could find willing doctors and patients that would trust me to record their interactions and gain the necessary research approvals, recording consultations would be no guarantee of natural data, representative of everyday practice. It would be impossible to determine whether participants ‘reacted’ to being recorded (observer bias). Indeed, this has been questioned by participants in previous studies which have used recordings of clinical consultations in community psychiatric settings (Duffett, 2002; Rajesh, 2002)\(^\text{17}\).

On balance, I felt that interviews constituted the most appropriate and feasible approach available to me and would generate detailed, relevant and ‘on topic’ data. Interviews were a familiar concept to participants, ethics committees and the primary audience of my research, offender health professionals. Also, issues such as informed consent, security and researcher safety could be considered and dealt with in a planned, systematic manner with the aid of information sheets, consent forms and security protocols. Yet, I did not want to make the mistake of glossing over the interactional element of interviews. On further consideration, attending to the situational and social aspects of interviews - how participants said what they said and how they oriented to me as the interviewer – could be accommodated within my social constructionist and discursive frameworks and could actually raise some interesting and potentially fruitful aspects to the analysis. With this in mind, I turned to the issue of reflexivity.

\(^{17}\) I did in fact gain permission to collect data from patient clinical records, such as entries about consultations and prescribing rationales. Whilst this was interesting, ultimately I did not feel comfortable using it within this thesis as I could not provide the level of detail that would add to ‘the story’ I wanted to tell without jeopardising confidentiality. Whilst these data were excluded from the analysis, it did help to shape my outlook on prescribing in prisons.
5.5 Reflexivity

Within the field of qualitative research, there is philosophical tension between those who believe that researchers can and should look beyond their preconceptions, and those who reject the notion that this is possible or even desirable (Tufford & Newman, 2012). My own view on the subject is that I cannot separate myself from my experiences. Rather, I concur with Silverman, who argues that (2005 p.29):

“To suppose that any researcher enters a field without past experience or some pre-existing ideas is unrealistic. To suppose that their presence will not exert an influence on the data is equally unrealistic.”

Nonetheless, I do agree that a level of transparency regarding one’s experiences and background is useful to understand how this may have shaped the work. In particular, I acknowledge how my previous Master’s study (Hassan, 2006) introduced me to a social constructionism and discourse analysis, which I took advantage of in the current study. I also recognise that my gender, ethnicity and social class were quite different from some of the people I interviewed (especially patients) and may therefore have particular implications for the way in which I was viewed. For example, it is possible that in perceiving such differences, interviewees may have withheld information that they thought I would not understand or approve of.

In the spirit of reflexivity, I have opted for an active, open style throughout this thesis, striving to provide a transparent and detailed account of my methods and reasoning throughout. Where possible, I have included reflections on my own practice (see Box 5 on page 132 for an example). I have also included my own contributions as an interviewer and a co-contributor to the jointly produced discourses (interviews), which are reproduced and deconstructed as part of the discourse analysis (paper four). This, I think, is a more integrated approach to reflexivity in comparison to offering a separate autobiography of my personal characteristics, background and experiences and will allow readers to make their own judgements.
5.6 Interview preparation, arrangements and procedures

5.6.1 Developing interview schedules

On the basis of my aim, research questions and emerging ideas about psychotropic prescribing in prisons (gained in study one), I prepared two semi-structured interview schedules, consisting of a variety of open and closed questions and prompts, specifically for this study. Schedules were intentionally meant to cover a broad range of topics, in order to encourage conversation and to capture fuller range of perspectives on psychotropic medication and create more opportunity for a detailed analysis.

Separate interview schedules were devised for staff and patients. Staff interview schedules (see Appendix I) covered the following topics: current professional role and previous experience; links with prescribers and mental health services in the community; experiences of the prescribing process in prison; perceptions of patients with mental illness in prisons; the role of medication in prisons; alternatives to medication; security and safety aspects of medication; and ideas for service improvements.

Interview schedules for patients were reviewed in the planning stages by patients in contact with prison mental health services at a training prison in the North West (this prison did not participate in the research). As a result, a number of amendments were made in response to their feedback including incorporating questions regarding the broader aspects of mental healthcare arrangements in prison (not just focusing on medication) and greater consideration of how patients felt towards alternatives to medication.

Patient interview schedules (Appendix J) covered the following topics: contact with mental health services outside of prison; mental health care arrangements in prison; medication arrangements during early custody; current medication arrangements; attitudes towards medication; attitudes towards alternatives to medication; autonomy and responsibility over health; relationships with prison healthcare staff; security and safety aspects of medication in prisons; and mental healthcare on release and beyond.
5.6.2 Selecting and approaching interviewees

Using a combination of purposive and snowball sampling (Bryman, 2004), I selected staff and patients from four prisons (the same establishments that participated in study two; see section 3.3.3) to take part in interviews. Participants were purposively selected, not because they were judged to be representative in some way, but because they had experiences or knowledge relevant to the practice of psychotropic prescribing in prisons.

I aimed to interview members of staff who were involved in the prescription, arrangement, dispensing, or administering of medication for mentally ill prisoners. As a guide, at each prison I tried to interview a prescriber (general practitioner and/or psychiatrist), a mental health worker and a pharmacist. I also adopted elements of snowball sampling, inviting other staff with relevant knowledge and experience to participate in interviews on the basis of recommendations from previous interviewees. Potential participants were sent letters of invitation to participate in the study, accompanied by a participant information sheet (Appendix K) which detailed the intended purpose and content of interviews. Interviews were then arranged with all those who agreed to take part.

In order to facilitate patient interviews, a member of the mental health team was nominated at each prison to act as a lead contact and to assist with the selection of participants. This member of staff reviewed patient clinical records in order to identify patients within the establishment who met the following inclusion criteria:

a) Had been prescribed antidepressant, antipsychotic, anxiolytic and/or stimulant medication during their current period of custody or immediately prior to custody;
b) Had prior contact with, or were currently on the caseload of, prison mental health services;
c) Were considered well enough and able to give written consent to participate; and
d) Were available and considered safe to be interviewed by a researcher working alone.

These criteria enabled me to include a range of patients with different medical and criminal justice histories, receiving different types of medication. If staff asked for further advice on participant selection, they were instructed to focus on recruiting a varied range of patients, on different medications with different views on healthcare, who would be willing to talk to
a researcher\textsuperscript{18}. Potential participants were approached initially by the lead contact to
discuss their participation in the study. All prospective participants were given a participant
information sheet which detailed the purpose of the study, what participation would involve
and confidentiality arrangements (Appendix L). Interviews were then arranged with all
those who agreed to take part.

5.6.3 Sample

In total, 33 individual semi-structured interviews were completed, comprising 16 members of healthcare staff and 17 patients. Two planned interviews with patients could not be completed within the time allotted to me in prison. The final sample of healthcare staff consisted of three GPs, five mental health in-reach nurses (including 3 managers), two primary care mental health nurses, three pharmacists, a psychiatrist, a healthcare manager and a substance misuse professional. The final sample of patients consisted of 13 men and four women, aged between 19 and 52 years, who received hypnotic/anxiolytic (n=4), antidepressant (n=13) and/or antipsychotic medicines (n=10).

5.6.4 Setting

Interviews were conducted over the period August 2010 to May 2011. The majority of staff interviews were conducted face-to-face at the interviewee’s place of work, usually in private rooms within the healthcare department at the prison or in local community NHS Trust offices. Occasionally, if staff were too busy to leave their desks, or if there was no private space available, interviews were conducted in places also occupied by other staff. Two interviews with members of staff could not be completed during pre-arranged visiting dates and so were completed via the telephone at a later date.

Patient interviews were conducted face-to-face in private rooms in prison healthcare departments, the legal visits area or occasionally in quiet areas on residential wings. Interviews were usually scheduled by appointment, so that officers could escort patients

\textsuperscript{18} From my impression of the interviews I subsequently obtained, I do not believe this led to only compliant patients being approached. As I recall, one member of staff, when instructed not to only approach ‘model patients’, replied, laughing, “there are no model patients here”.

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over to a waiting room or holding cell and then bring each patient to me in turn to be interviewed individually. All patients were interviewed on a one-to-one basis with no officers or other staff present.

5.6.5 Interview procedure

Immediately prior to interviews, I explained to participants the purpose of the study and checked that they had received, read and understood the participant information sheet. I gave them an opportunity to ask questions and a chance to opt out of the study. Once they were ready to proceed, each participant completed and signed a consent form, including consent to be audio recorded (Appendices M and N).

Interviews were audio recorded using an Olympus DS-30 digital recorder. Two participants exercised their right not to be audio recorded; on these occasions handwritten notes were taken instead\(^\text{19}\). As guidance on interviews suggests (Britten, 1995), I began interviews with ‘easier’, closed and more factual questions (for example demographic information) before proceeding to open questions and more challenging topics. During the interview I used the interview schedule to guide the conversation. I strived to be an active interviewer, listening carefully, probing responses where necessary and showing interest throughout. It was often challenging to do this whilst simultaneously mentally phrasing the next question, attending to my surroundings and reflecting on whether questions had been sufficiently answered. As Wengraf (2001 p.194) says:

"You must be both listening to the informant’s responses to understand what he or she is trying to get at and, at the same time, you must be bearing in mind your needs to ensure that all your questions are liable to get answered within the fixed time at the level of depth and detail that you need".

I allowed two-way conversation, but tried to keep the focus on the participant, interjecting with my own comments, questions, probes and challenges, mainly to guide the topic of conversation and/or to keep the discussion going. At first, I strived to keep my comments relatively neutral and fairly non-directive (Whyte, 1982), however it became increasingly clear that this wasn’t always sufficient to encourage interviewees to engage with me. I reasoned that if I wanted to hear what interviewees had to say, then appropriate displays of empathy, agreement and even occasional challenges were sometimes expected and/or

\(^{19}\) Quotations that are based on handwritten notes have been indicated as such.
necessary; in any case, my comments and influence on the course of conversation could be included and analysed in the discursive layer of the analysis. In one interview in particular, in the face of persistent questioning and requests for help, I found it difficult to avoid the recognised pitfall of offering advice to a patient (Field & Morse, 1989). Although I originally considered this a ‘failed’ interview, it encouraged me to reflect on my interview style, ethical stance and it was fruitful in analytical terms (see Box 5).

The semi-structured nature of interviews meant that participants had the freedom to address topics of conversation not identified *a priori* on the interview schedule. This proved to be simultaneously an advantage and a disadvantage. Whilst this flexibility led to some fruitful and unanticipated lines of discussion, I sometimes struggled to guide more verbose interviewees back if discussion strayed off-topic for too long. Similarly, the ability to reorder questions was useful in allowing me to pursue natural shifts in conversation thereby preserving flow, but meant that I sometimes missed things or repeated questions. Overall, however the semi-structured format was largely successful and effective.

Interviews were brought to a close once topic areas on the schedule had been addressed, if the allotted time for the interview had ran out, or if the participant had to leave. At the end of interviews, I routinely gave participants an opportunity to summarise their thoughts and to discuss any other topic areas that they thought relevant but were not included in the interview schedules. Interviews lasted on average 30 minutes (range 14-59 minutes).

**Box 5: Reflexive account of a ‘failed’ interview**

In addition to being technically difficult, doing interviews can be emotionally challenging, especially when you are discussing sensitive personal experiences and topics like mental illness. Over the last five years in which I have been working at the Offender Health Research Network I have conducted over two hundred interviews with prisoners for research purposes. However, no matter how many you do, for one reason or other, some interviews stand out as being particularly difficult.

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20 Interview time was limited for a number of reasons. Staff participated in work time, and could not be away from their posts for too long. Interviews with patients were constrained to allotted times within the prison regime where they could be escorted to and from the researcher. Occasionally, staff and patients had to terminate interviews prematurely if they were called to respond to an unexpected incident, and in one case, an external hospital appointment.
I found one of the interviews I did with a patient for this study particularly challenging. He said he had been getting medication in prison, but had received little psychiatric input or other help for his mental health problem. During the course of the interview he became more agitated and asked me for my advice about his health. This, in itself, was not unusual. I duly explained that I was not a health professional and couldn’t give him any advice. I expected it to end there, as it usually does.

The interview continued. However he continued to throw questions at me, asking me for advice on health and other matters. Could he drink alcohol with his medication? What were the best treatments for his mental health problem? Did I agree with his diagnosis? I deflected these questions and tried to neutralise the situation the best I could, but he continued. Even if I was not a health professional, he reasoned, I must know something. I found this off-putting and disconcerting – after all, wasn’t I supposed to be the one asking the questions?

Things came to a head when he asked me to intervene on his behalf and speak to the prison Governor about him and get him an appointment with the psychiatrist. I started to question his motives for participating in the interview. He was clearly upset and frustrated about his situation. But I was not there to advise him or act as his advocate. On the other hand, I felt uneasy about doing nothing, knowing that he wanted help. It was confusing.

I decided to stop the audio recording and we spoke a little about the problems he was having with mental health services and why he had agreed to participate in the research. During this discussion, we agreed that I would speak to a member of the in-reach team about him, in line with the protocol I had agreed earlier with the prison. I reminded him about the purpose of the interview and asked him if he wanted continue (he did) and whether he wanted me to exclude his data from the study (he didn’t).

After that he seemed much happier. We completed the interview and I spoke to the in-reach team, as we had agreed. I left the prison feeling glad that I had communicated my concerns, but also a little ‘silly’, like I had been taken advantage of in some way. I wondered whether I would have felt the same if he had been a patient in the community. I felt like the interview had gone wrong in some way.

Once I got back to the office, I spoke to my supervisors about what had happened. One of my supervisors listened to the interview and gave me feedback on how I had handled the situation, which helped and reassured me. On the whole, I felt that the experience was
useful. It taught me to be more prepared for questions directed at me and I had an opportunity to practice the procedures I’d set out in my ethics application. In addition it reminded me to be aware of the different reasons why people might want to take part in research (voiced and unvoiced) and encouraged me to be even clearer about how I explained my role and the purpose of the interview from the outset. It also made me think: although the pressure exerted on me was relatively mild, it was still uncomfortable. How would it feel to be a doctor in prison, in a position to allocate healthcare resources, powerful medications and make important decisions about whether or not patients should be sent to hospital? Armed with these new insights, I no longer thought of it as a ‘failed’ interview, but a valuable opportunity for improvement and reflection.

5.6.6 After the interview

Following interviews, participants were debriefed. I thanked them for taking part and reminded them of their right to withdraw their data from the study (none did this), how their data would be used, who would have access to the recordings and how the findings from the study would be disseminated. Participants were also given a further opportunity to ask questions about the study. One patient had concerns about his own mental health following the interview and asked me to speak to the prison mental health team on his behalf, which I did (see Box 5 for further details).

Participants sometimes paused to chat following the interview. While we sometimes talked about topics unrelated to the interview, quite often participants offered further, often less guarded, comments on interview topics or reflected on how the interview had gone. While interesting and potentially useful, to resolve ethical dilemmas I decided that I would not use anything said after the recorder had been switched off (although it would be impossible to delete it from my thoughts or ‘brace’ it off in my mind). Similarly, I did not use any comments or observations offered by staff who were not part of the study, such as those who escorted patients to interviews.

I often used the time following interviews to make ‘field notes’ to record any special notes about context. Sometimes, perhaps due to the arrival of the next interviewee or my escort, I was not able to do this straight away. In such cases notes were made later that day or at
the earliest opportunity. I used such opportunities to reflect on any observations about the environment, the interviewee or non-verbal communication that could not be captured on audio recordings, in effect what the interaction ‘felt like’\textsuperscript{21}. I also made notes to myself about new lines of inquiry to follow up in subsequent interviews, or amendments to questions.

5.7 Ethical considerations

Informed written consent was taken from all interviewees, including permission for the researcher to audio record the interview and to access their personal prison clinical record for the purposes of the research. Potential participants all received a participant information sheet (read aloud, if necessary) that fully described the study, rights to withdraw and the limits of confidentiality\textsuperscript{22} (see Appendices K and L).

To compensate for the reduced literacy levels apparent in offender populations, written and spoken information was delivered in simple language to patients. Also, the researcher gave patients the option of having the information sheet read aloud to them. All potential participants were given the opportunity to ask the researcher questions before taking part. The researcher was able to consult with a member of the prison mental health team if there was any doubt over capacity to consent amongst individual interviewees. Participants gave their express written consent prior to the interview to be audio recorded and for direct quotations to be used in publications.

Researchers should take steps to minimise potential harm, both to the participants involved in the research and to themselves. Where potentially sensitive topics (e.g. mental health problems) were discussed during interviews, efforts were made to reduce the potential for causing harm or distress to participants. Questions were worded sensitively and during interviews I remained vigilant for signs of distress and, where necessary, reminded the participant that that they could refuse to answer questions or stop the interview at any time.

\textsuperscript{21}For example, interviews took place in the legal visits area in one prison, an unusual physical environment, so I noted details about it in case it affected interviewee responses.

\textsuperscript{22}Researchers are under a duty to disclose certain information to the Prison Service. This includes behaviour that is against prison rules and can be adjudicated against (see Section 51 of the Prison Rules 1999), illegal acts, and behaviour that is harmful to the research participant (e.g. intention to self-harm or complete suicide).
without consequence. As a precaution, I took contact details for a member of the prison mental health team who could be contacted if I had concerns about the wellbeing of a participant following the interview. I used this only on one occasion, at the request of a participant to do so. Working in prisons is inevitably associated with a degree of risk to personal safety. A series of safety procedures were identified ahead of data collection, during and following interviews to minimise the degree of personal risk to myself (Box 6).

**Box 6: Agreed procedures to minimise risk of harm to the researcher**

**Prior to interviews:**
- attend NHS breakaway training and any other mandatory prison safety training; signed into the healthcare wing (where such systems were in place)
- advise staff of the expected duration of the interview
- seek advice from prison staff regarding prisoner current mood and significant events that may have affected this (e.g. bad visits)
- exclude any potential interviewees that were unsafe to see alone, as recommended by prison staff.

**During interviews:**
- remain vigilant to signs of changes in prisoner mood
- position myself, furniture and seating to allow clear access to alarm buttons and exit routes and
- be prepared to terminate the interview if I feel unsafe

**Following interviews:**
- advise staff regarding any concerning behaviour (e.g. intention to self-harm)
- sign off the healthcare wing (where such systems were in place)
- attend regular supervision sessions with the CI and report any safety related incidents to the research team and prison.
Precautions were taken to ensure the privacy of participants and the confidentiality of their personal data. Personal identifiable data from prison and medical records did not leave the prison and was handled only by members of the direct healthcare team, unless prior written consent had been obtained. Interview recordings and signed consent forms were transported to Offender Health Research Network offices at the University of Manchester and stored on password-protected computers and/or locked filing cabinets (for manual data) in accordance with the Data Protection Act (1988). Only aggregate data and anonymised data (including direct quotations) were published.

5.8 Transcription

Transcription has been defined as ‘the process of capturing the flow of discourse events in a written and spatial medium” (Edwards, 2003 p.322). Although recordings are useful tools, indeed the primary data source, in qualitative research, by themselves they can be difficult to systematically analyse. Transcripts are therefore invaluable, especially where fleeting events and features of interaction including overlaps, pauses and stresses, are of interest, as in discourse analysis.

Transcribing is not, however, a neutral process; rather, it is “inherently selective and interpretive” (Edwards, 2003 p.321). Transcription inevitably results in features of the interaction being erased, such as contextual or non-verbal data (Miles & Huberman, 1994 p.56). Decisions are made about what to include, the level of detail and how to present it. For such reasons, Silverman goes even further, proposing it is synonymous with data analysis (Silverman, 2005 p.83):

‘the preparation of a transcript from an audio or videotape is a theoretically saturated activity... it is data analysis’.

For such reasons, I elected to do my own transcription. Transcription is a notoriously slow process, often delegated to professional companies. However, I felt that transcribing the interviews myself offered a number of tangible advantages, including helping to familiarise myself with the data, providing an opportunity to reflect on my interview style, reducing inaccuracies\(^{23}\), increasing reliability (one transcriber) and conserving research funds.

\(^{23}\)Factors such as inaudibility (loud, echoey environments with lots of background noise), strong regional accents, local dialects, ‘prison speak’, and poor recording quality are common in prison research, which could make it especially difficult for others to transcribe.
Approximately half of interviews were transcribed during the data collection stage; the remainder were transcribed on completion.

In transcription, decisions have to be made with regard to both format and content. I chose a vertical format (Edwards, 2003), where speaker turns are arranged in a single column, denoting equal weight to interviewer and interviewee comments. This format was familiar to me and compatible with the computing analysis software which I intended to use (NVivo). Recordings can be transcribed in different levels of detail. Thus, all interviews were initially transcribed verbatim, including interviewer comments, using standard orthography. Pronunciations and regional accents were not preserved, but hesitations and filler sounds (errs, ums and ahhs) were included.

5.9 Data analysis

“In the social sciences, there is only interpretation. Nothing speaks for itself.”

(Denzin and Lincoln, 1994 p.20)

5.9.1 Part one: thematic analysis

To examine my third research question (see section 2.6), I used thematic analysis based in a social constructionist epistemological framework. Thematic analysis has been described as “a method for identifying, analysing and reporting patterns (themes) within data”, with themes representing “some patterned response or meaning within the data set” (Braun & Clarke, 2006 p.82).

Thematic analysis has a number of advantages, which may account for its popularity among researchers. In the case of this study, thematic analysis was selected as it is flexible, simple, and likely to yield clear findings that are accessible to practitioners, patients and policy makers (Braun & Clarke, 2006). Thematic analysis is not tied to any particular epistemology, theoretical framework or camp (Braun & Clarke, 2006). Thus, it is perfectly possible to conduct a thematic analysis grounded in a social constructionist perspective, with an emphasis on identifying the varied range of meanings ascribed to medication by different interviewees.
Thematic analysis is a widely-used, yet often poorly demarcated method of qualitative analysis within the social sciences (Braun & Clarke, 2006). My approach to analysis drew on two principal sources, which I considered broadly compatible and complementary: the work of Miles and Huberman (1994) and of Braun and Clarke (2006). Miles and Huberman describe a three-stage process (data reduction, data display and conclusion drawing/verification), while Braun and Clarke identify six steps (Table 7, page 140). Neither approach should be regarded as strictly linear. For clarity, I have mapped out my own approach as fairly sequential, with one phase being completed before moving on to the next. In reality, however, data analysis was far more of a recursive process, with substantial overlap and movement back and forth between the various stages.

I began the analysis by immersing myself in the data in an effort to gain familiarity with it. This started whilst data collection was still ongoing, through repeatedly listening to the original audio recordings of interviews. Then, during the transcription process, I began to highlight interesting words and phrases, to generate some initial thoughts about codes that could be used to effectively reduce the data. Codes are labels, which are assigned to data with similar meanings (Miles & Huberman, 1994). Beginning coding during the data collection process helped me to shape my emerging map of ideas and concepts and to interview more effectively. As Miles and Huberman say coding “drives ongoing data collection” (1994 p.65). I also enlisted the help of a supervisor, who read through interview transcripts in full to give focused feedback on interview style and to make suggestions about coding. This helped to reduce the likelihood that important themes would be missed.

I used NVivo (version 8, QSR International Pty Ltd., 2008), a qualitative data analysis software package, to generate an initial list of codes (free nodes) and began coding transcriptions. On completion of the data collection and transcription process, I then went through each transcription systematically and repeatedly. Following the advice of Braun and Clarke (2006), I coded liberally and inclusively; thus the initial list of codes, and the associated data, mushroomed (over 60 codes). Some codes were left as independent categories (free nodes), whereas others were organised hierarchically (tree nodes) to denote emerging ideas about their interrelationships. The names of codes and the coding structure were frequently revised and refined as codes accumulated. Coding continued until data saturation had been reached, where content had been coded into as many relevant categories as possible.
Table 7: Phases of thematic analysis (Braun & Clarke, 2006; Miles & Huberman, 1994)

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<tbody>
<tr>
<td><strong>1</strong> Data reduction</td>
<td>1 Familiarising yourself with your data</td>
<td>Transcribing data (if necessary), reading and re-reading the data, noting down initial ideas.</td>
</tr>
<tr>
<td></td>
<td>2 Generating initial codes</td>
<td>Coding interesting features of the data in a systematic fashion across the entire dataset, collating data relevant to each code.</td>
</tr>
<tr>
<td><strong>2</strong> Data display</td>
<td>3 Searching for themes</td>
<td>Collating codes into potential themes, gathering all data relevant to each potential theme.</td>
</tr>
<tr>
<td></td>
<td>4 Reviewing themes</td>
<td>Checking if the themes work in relation to the coded extracts (Level 1) and the entire dataset (Level 2), generating a thematic ‘map’ of the analysis.</td>
</tr>
<tr>
<td><strong>3</strong> Conclusion drawing/verification</td>
<td>5 Defining and naming themes</td>
<td>Ongoing analysis to refine the specifics of each theme, and the overall story the analysis tells, generating clear definitions and names for each theme.</td>
</tr>
<tr>
<td></td>
<td>6 Producing the report</td>
<td>The final opportunity for analysis. Selection of vivid, compelling examples, final analysis of selected extracts, relating back of the analysis to the research question and literature, producing a scholarly report of the analysis.</td>
</tr>
</tbody>
</table>

As I coded, I used memos to capture my emerging thoughts and ideas about the analysis. Memo writing has been defined as “the theorizing write-up of ideas about codes and their relationships as they strike the analyst while coding” (Glaser, 1978 p.83). Although traditionally associated with grounded theory approaches, Miles and Huberman (1994) recommend memos in a general way as a tool for helping analysts to step back from the data and reflect on its meaning. Memos were written solely for me, to record fleeting moments of insight that I would otherwise forget, remind me where I was going next with the analysis, and help me make sense of things. In this sense, memo writing captured my emerging ideas about themes and helped me to move forward to the next stage of the analysis.

Next, I began the process of translating codes into themes. I started by clustering similar codes together, testing different combinations to see which could usefully be combined into themes. Once I had identified a set of candidate themes, I used visual data displays to summarise and develop ideas about the relationships between them. Data display is a central concept for Miles and Huberman (1994), who devote some five chapters to this in their book. Broadly, data displays fall into two categories: tables (which Miles and Huberman refer to as matrices) and network diagrams. I used various formations of
thematic networks to summarise the range of themes and how they could be organised into overarching themes and subthemes. Tables were also used to compare staff and patient perspectives in a tabular format, with columns for salient quotations and data extracts.

The next stage of the analysis was to review and refine my collection of candidate (possible) themes. Following the guidance of Braun and Clarke (2006) this involved two levels of review. Firstly I checked the data extracts grouped under each theme for coherence and consistency, further collapsing, expanding and subdividing themes as necessary. Secondly, using thematic networks and other visual displays, I considered the overall fit and organisation of my collection of themes, arranging and rearranging until it accurately reflected my dataset as a whole. Themes that were not conceptually coherent or insufficiently supported by the data were discarded.

Once I was relatively satisfied with the thematic categories, I decided upon names that accurately captured the essence of what each theme represented. Then, I wrote accompanying narratives to summarise and define each theme. Here, the memos I had regularly updated and developed throughout the analysis were invaluable, providing a basis for my analytical account. During this process, I made some final refinements to themes and looked for exemplar cases, quotations and data extracts to illustrate themes. The final thematic analysis was then depicted as a thematic network. In practice, these final two stages (refining themes and writing narratives) were repeated a number of times in an iterative process, in response to feedback from my supervisors and peers.

5.9.2 Part two: discourse analysis

Discourse analysis entails attention to detail and typically involves much smaller datasets than other types of qualitative analysis. For the purposes of the current study, I sought to focus on a specific, empirically interesting, specific type of phenomena: accounts of blame or responsibility pertaining to reduced access to prescribed medications in prison (i.e. medication withdrawal, and/or dose reduction), which patients perceived as problematic. An account has been defined as, ‘an interpretive and justificatory discourse, the topic of which is a social interaction’ (Harré, 2001 p.700). Accounts can be regarded as complex social productions, which occur whenever conduct is perceived to be problematic or falls short of expectations. Thus, from a discursive stance, how people represent themselves and
others, and their experiences of prescribing decisions in prison should be regarded as active accounts, rather than neutral descriptions, designed to accomplish particular social actions, such as complaining, attributing responsibility, or justifying.

NVivo was used to identify (code) all instances where descriptions of events that fitted these criteria were discussed, either by patients or healthcare staff. Subsequently, three extracts (accounts) were selected for a more detailed discourse analysis. Two extracts were taken from interviews with patients; the remaining extract was taken from an interview with a GP. I selected these extracts because they were interesting and analytically rich from a discursive perspective. They were not chosen because they were viewed as representative or exceptional. Selecting a subset of data from a larger dataset in this manner is not an uncommon approach in discursive psychology (Auburn & Lea, 2003; Sneijder & te Molder, 2005; Wilkinson & Kitzinger, 2000). Indeed, one possible question for future research might be to establish the extent to which the discourses and rhetorical strategies identified in these extracts are used elsewhere, by other speakers.

Discourse analysis benefits from some sort of additional level of detail on the features of talk, other than words, that have been shown by studies of interaction to be treated as relevant by speakers (e.g. speed, emphasis, intonation, overlap and pause length) (Jefferson, 2004). However, there are conflicts between those who argue this level of detail is necessary (e.g. Potter & Hepburn, 2005b) and those that argue such minutia detracts from more ‘broader’ features of talk (Poland, 2001; Potter & Wetherell, 1987). Therefore, extracts selected for analysis were transcribed in greater detail, using a simplified version of the transcription developed by Gail Jefferson (Hutchby & Woofit, 1998), in order to capture the most important additional non-verbal features of speech (see Box 7, page 143).

The four extracts, including interviewer comments, were subjected to a detailed discourse analysis. A Foucauldian-influenced approach was used to identify the discourses participants drew upon to construct accounts and the subject positions utilised within them. Principles of discursive psychology were used to demonstrate how accounts, rather than being neutral descriptions of events, were discursively and rhetorically constructed to produce particular effects, legitimise particular versions and interpretations of events and to undermine others.
Box 7: Transcription conventions

<table>
<thead>
<tr>
<th>Convention</th>
<th>Description</th>
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<tbody>
<tr>
<td>(.)</td>
<td>short (untimed) pause</td>
</tr>
<tr>
<td>(2)</td>
<td>pause in seconds</td>
</tr>
<tr>
<td>Yes</td>
<td>underlined word or syllable indicates added emphasis</td>
</tr>
<tr>
<td>(word)/(unclear)</td>
<td>utterance difficult to discern</td>
</tr>
<tr>
<td>(laughs)</td>
<td>laughter</td>
</tr>
<tr>
<td>right</td>
<td>semi-colon indicates elongated sound</td>
</tr>
<tr>
<td>NOW</td>
<td>block capitals indicate louder speech</td>
</tr>
<tr>
<td>“no”</td>
<td>indicates quieter speech</td>
</tr>
<tr>
<td>&gt;basically&lt;</td>
<td>words spoken quickly</td>
</tr>
<tr>
<td>&lt;well&gt;</td>
<td>words spoken slowly</td>
</tr>
<tr>
<td>You kn-</td>
<td>hyphen indicates cut off speech</td>
</tr>
</tbody>
</table>

As a starting point, I used Edwards and Potter’s (1992) Discursive Action Model (DAM) as a conceptual basis for orienting to discursive features of interview accounts. The DAM has a threefold focus on action, fact and interest, and accountability (see Box 8, page 144). This trio provided a practical framework for initial coding and attending to the discursive features of the analysis; for example, examining how the factuality of particular versions of events were constructed or undermined through discourse, and how these were linked to justifying decisions about access to psychotropic medication in prisons. Building on the initial observations facilitated by using the DAM, I brought in other theoretical concepts and tools from both discursive psychology and Foucauldian discourse analyses as required to develop a full analytical account.

As I conducted the analysis I also kept a number of questions in mind, which helped me to attend to the rhetorical and performative aspects of accounts:

- How are differences in approaches to healthcare between communities and prisons presented?
- How are accounts structured to justify or deny access to prescribed psychotropic medication?
- What are the rhetorical strategies used to increase the factual nature of accounts?
- What subject positions are used?
**Box 8: The Discursive Action Model (DAM)**

*Action*

1. The focus is on action, not cognition.
2. Remembering and attribution become, operationally, reportings (and accounts, description, formulations, versions and so on) and the inference that they make available.
3. Reportings are situated in activity sequences such as those involving invitation refusals, blaming and defences.

*Fact and interest*

4. There is a dilemma of stake or interest, which us often managed by doing attribution via reports.
5. Reports are therefore constructed/displayed as factual by way of a variety of discursive techniques.
6. Reports are rhetorically organised to undermine alternatives.

*Accountability*

7. Reports attend to the agency and accountability in the reported events.
8. Reports attend to the accountability of the current speaker’s action, including those done in reporting.
9. The latter two conditions are often related, such that 7 is deployed for 8, and 8 is deployed for 7.

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**5.10 Quality in qualitative research**

Most researchers accept that different quality standards are required for qualitative and quantitative research (Bryman *et al.*, 2008; Mays & Pope, 1995b). In qualitative research, the work of Lincoln and Guba (1985) has been influential. Framing their discussion within the notion of ‘trustworthiness’, they identify four quality criteria, which I consider relevant to both the thematic and discursive aspects of the analysis: credibility, transferability, dependability, and confirmability (Lincoln & Guba, 1985). Although not universally
accepted, these criteria are widely cited among qualitative researchers and have the advantage of parsimony (Bryman et al., 2008).

Two of the strategies recommended by Lincoln and Guba (1985) were used to increase the credibility of, or confidence in, findings: triangulation and peer debriefing. Firstly, triangulation of sources and analytical procedures was used to enrich the account of psychotropic prescribing in prisons. This was achieved by interviewing staff and patients with different perspectives on prescribing and through complementary layers of analysis to elucidate the thematic and discursive aspects of accounts. In a broader sense, the qualitative component of the study was framed within a mixed methods study, which also to develop a more comprehensive, robust understanding of how psychotropic medications were used and viewed in prisons.

Secondly, I recruited a colleague with experience in qualitative research methods, to act as peer debriefer for the study. Peer debriefing has been defined as “a process of exposing oneself to a disinterested peer in a manner paralleling an analytic session and for the purpose of exploring aspects of the inquiry that might otherwise remain only implicit within the inquirers mind” (p.308). The peer debriefer and I met periodically throughout the qualitative analysis process to discuss matters of methodology and analytical procedures, providing me with an opportunity to test out my emerging theories about themes and the analysis.

Transferability can be regarded as the qualitative equivalent of external validity, referring to the extent to which findings are applicable to other settings, situations and contexts. By providing a ‘thick description’ of prescribing in prisons, adequately contextualising the data and describing methods in sufficient detail I hope to enable others to evaluate how the conclusions drawn in this study might be of relevance to other contexts and situations. Peer debriefing sessions were also used to review methods and to pose questions about the analysis, thus helping to produce a better articulated account of the procedures used.

Dependability and confirmability are indicated by research that is repeatable, consistent and displays a degree of neutrality; a defence against the ‘anything goes’ criticism of qualitative research (Mays & Pope, 1995b). Dependability and confirmability were increased by leaving a comprehensible audit trail to show how findings were reached and demonstrating the
replicability of processes. In this sense NVivo was an invaluable tool, which allowed me to document the unfolding analysis, integrating field notes, memos, transcribed data and recordings. Final analyses were accompanied by selected interview extracts, transcribed in detail, to allow others to judge the plausibility and coherence of the analysis.

One supervisor also read through interview transcripts in full in order to give focused feedback on interview style and to make suggestions about coding. This helped to reduce the likelihood that important themes would be missed by the analysis. Also, by carefully examining my findings and providing detailed feedback on drafts of the analysis, my academic supervisors challenged me to ensure my interpretations were adequately supported by the data. Finally, whilst I cannot claim complete neutrality, I hope to increase the confirmability of findings by being open about my reasoning and acknowledging the extent to which the findings of the study are shaped by my own perspectives (also see section 5.5 on reflexivity).

5.11 Summary

This chapter has described the methods associated with the qualitative component of this mixed methods study. The development and rationale for a dually oriented (thematic and discursive) qualitative approach has been presented to respond to research questions three and four. Methods of data collection have been described and evaluated, ethical issues have been considered and criteria for judging the quality of the research have been identified. The next chapter will describe the findings of study three.
6. Findings: Part 2

6.1 Paper 3

Prescribing for mentally ill prisoners: prisoner and healthcare staff perspectives

Hassan L, Senior J, Edge D & Shaw J.

Submitted to British Journal of General Practice, March 2012
Abstract

Background
Rates of mental illness are higher among prisoners than in the community. While there is little information about psychotropic prescribing patterns in prisons, concerns have been raised about the appropriateness of prescribing and overreliance on such medicines.

Aim
To explore patient and staff perspectives on reasons for psychotropic medication use in prisons.

Design
Qualitative study using semi-structured interviews.

Setting

Methods
A purposive sample of patients prescribed psychotropic medicines and healthcare staff were recruited from four East of England prisons. Participants took part in individual semi-structured interviews, which were recorded, transcribed and analysed thematically.

Results
Patients and healthcare staff viewed psychotropic medicines primarily as a treatment for reducing symptoms of mental illness, but also as a coping strategy and to reduce insomnia. Psychotropic prescribing was also thought to contribute towards the rehabilitative aspects of the prison regime and maintaining order. Whilst staff voiced concerns regarding possible overreliance on psychotropic drugs, patients perceived insufficient access to alternative forms of treatment and support in prison.

Conclusion
Psychotropic medicines are considered a useful resource in prisons, but appropriate prescribing in these settings remains challenging. Further work may be needed to find the
right balance between psychotropic medicines and alternative, non-pharmacological therapies in prisons.

Key words: Prison, prescribing, psychotropic, mental illness.

Introduction

Rates of mental illness are much higher in prison than in the community; in western countries, one in seven prisoners have psychotic disorder or major depression (Fazel & Danesh, 2002). Therefore, a higher level of need for psychotropic medication is likely. Prisoners are entitled to an equivalent standard of healthcare as that received by the wider community (Health Advisory Council for the Prison Service, 1997). Whilst the prescription of medication is central to modern mental healthcare, the use of psychotropic drugs in prison has, historically, been controversial. In the past, ethical questions were raised regarding the extent to which psychotropic drugs were prescribed to treat or to control ‘difficult’ prisoners (Sim, 1990). Confusion over the roles of prison doctors and the high level of secrecy surrounding the use of medicines in prisons further exacerbated the situation.

In 2006, the NHS assumed financial and commissioning responsibilities for UK prison healthcare. Recently, prescribing for mentally ill prisoners has, once again, come under scrutiny (Bowen et al., 2009; Hassan et al., 2011b; HM Inspectorate of Prisons, 2007; RCGP, 2011). Reliable data on psychotropic prescribing in prisons are scarce. However, Her Majesty’s Inspectorate of Prisons recently suggested psychotropic medicines were over relied upon in prisons (HM Inspectorate of Prisons, 2007). Longstanding issues with the misuse and trading of psychotropic medicines in prisons, and associated safety and security risks, only add further weight to these concerns (Hassan et al., 2012). Yet, in contrast, qualitative studies have noted dissatisfaction amongst patients who have reported inadequate access to medicines in prisons (Bowen et al., 2009; Condon et al., 2007; Douglas et al., 2009).

Recent guidance from the Royal College of General Practitioners has reiterated that prescribers in prisons need to balance security and safety risks against individual health needs (RCGP, 2011). Thus, doctors working in prisons arguably remain in delicate positions,
under pressure from both prisoners and the Prison Service. To gain insight into the views of prisoners and healthcare staff, a qualitative study was carried out as part of mixed methods research into psychotropic prescribing patterns in prisons. In this paper, we aimed to explore healthcare staff and patient perspectives regarding the purpose of psychotropic prescribing in prisons.

Methods

A qualitative study using individual interviews was carried out in four East of England prisons. Sites were purposively selected to represent a range of prison types, including two adult male ‘local’ prisons, which served the courts, one adult male ‘training’ prison for sentenced prisoners and a women’s prison. Ethical approval for the study was granted by Northern and Yorkshire REC (Ref: 09/H0903/54).

Participants

Healthcare staff and patients were selected for interview using purposive sampling. Initially, a GP, community psychiatric nurse (CPN) and pharmacist at each prison were invited to participate; subsequently, staff suggestions were followed up regarding other potential interviewees. Prison mental healthcare staff reviewed patient clinical records in order to identify potential participants who had experience of being prescribed psychotropic medication (antidepressants, antipsychotics, hypnotics and/or anxiolytics), had no risk markers (indicating they could not be interviewed alone) and had been assessed or treated by prison mental healthcare services. Staff met with prospective participants to explain the purpose of the research, issue written participant information sheets and invite participation. A researcher (LH) then met willing participants to take consent and conduct interviews. All interviewees took part on a voluntary and confidential basis and gave informed, written consent. Data collection continued until saturation was achieved: that is, interview data yielded no further new information. The final sample consisted of 17 patients and 16 members of healthcare staff (Table 1).

Interviews

Participants were interviewed individually between August 2010 and May 2011. Interviews were conducted in private rooms in prisons or participants’ workplaces, with no staff present. We developed, piloted and used separate topic guides for staff and patients
(available on request), which identified key areas to cover, sample questions and prompts. Topic guides were used flexibly to provide a common framework for interviews, thus ensuring key areas were addressed, whilst allowing interviewees scope to introduce novel topics. Interviews were digitally audio recorded, unless participants declined to be recorded (on two occasions written notes were taken instead).

**Analysis**

We conducted a thematic analysis, underpinned by a social constructionist epistemology; thus, there was an emphasis on how the concept of prescribing in prison was understood from the perspectives of healthcare staff and patients. Thematic analysis was selected as it is flexible, simple, and likely to yield clear findings that are accessible to practitioners, patients and policy makers (Braun & Clarke, 2006). The analysis followed the approach described by Braun and Clarke (Braun & Clarke, 2006). Firstly, interviews were transcribed verbatim. NVivo version 8 qualitative data analysis software (QSR International Pty Ltd., 2008) was then used to systematically code transcripts and to organise codes into coherent themes and subthemes. Themes were further developed, refined, finalised and named in an iterative and comparative process, with regular reference to interview transcripts. Quotations were selected to illustrate themes. The final analysis was reviewed among the team for accuracy, consistency and coherence and depicted visually.

**Results**

Figure 1 summarises patient and staff perspectives on the uses of psychotropic medication in prisons. This shows how the analysis yielded two main themes, operating on two levels: an inner level representing primary uses of prescribing (mental health), and an outer level representing secondary uses of prescribing (prison regime). Each main theme comprised a number of sub-themes.

**Mental health**

Patients and staff alike viewed improved mental health as the primary purpose behind psychotropic prescribing in prison. Reasons for using/prescribing psychotropic drugs were grouped into three subthemes: reducing symptoms, coping and better sleep.
Reducing symptoms

Patients reported that they suffered from a range of symptoms of mental illness, including hallucinations, delusions, paranoia, depression, insomnia, panic attacks and anxiety. None of the patients interviewed viewed psychotropic medication as a ‘cure’. Rather, the dominant view was that psychotropic medication helped to reduce the severity and/or frequency of symptoms:

‘They [antipsychotics] don’t get rid of my voices altogether, they’re still there. It’s like having a radio on continuously, blaring in your ears and it turns the radio down to [whispered] an ever so quiet whispering.’ (Patient 15)

Taking psychotropic medicines for this purpose was consistent with the official view offered by healthcare staff, who stated that psychotropic medication could be used to ‘reduce’, ‘alleviate’ or ‘stop’ symptoms:

‘The purpose of medication was to alleviate the symptoms and make it better for them.’ (Psychiatrist 1)
‘What I’m saying is if somebody is psychotic, if you gave them an antipsychotic medication, obviously we are hoping here that the voices, or the hallucination will diminish or will stop.’ (CPN 2)

Several patients based their perceived need for medication on previous experiences where they had missed doses or stopped them altogether. On such occasions, sooner or later, patients reported that symptoms returned. One prisoner described the impact when his antidepressants were withdrawn in prison, against his wishes:

‘After the sort of first week of not having the medication, I started to notice I was getting much more emotional and I was- sleep patterns were all over the place, my mind was sort of out of control’. (Patient 11)

Coping

Patients, particularly those with psychotic disorders, portrayed coping with mental illness as an ongoing personal struggle and were candid about the anxiety, distress and fear they experienced. Reports of having been hospitalised, sectioned or having attempted suicide were not uncommon. However, psychotropic medication improved their perceived ability to cope. Patients commented on how taking psychotropic medicines prevented distress and helped them to remain ‘stable’, ‘calm’ or ‘level’. Thus, even if symptoms could not be completely eradicated, with medication they felt better able to manage:
‘I’ve been on the meds I’m on for quite some time. I feel pretty much stable, I have my ups and downs, but that’s just part of it. I try to manage it the best I can.’ (Patient 3)

‘My main problem was that I was always thinking of… what had actually happened. And I start taking them [antidepressants] and you just sort of, if it comes into your head… just an emotionless state really, didn’t get upset, I didn’t get happy, I just (.) stayed flat, I suppose.’ (Patient 11)

Staff also acknowledged medicines could help to stabilise patients. However, they placed more emphasis on alternative methods of coping, such as talking therapies, group work, physical activity and bibliotherapy. Overreliance on medicines was a common concern:

‘People sometimes, I think, feel that the medication, that they rely on it too much and think I need, I absolutely need medication to function, when a lot of it can be coping mechanisms as well that need to be put in place.’ (CPN 3)

Many patients wanted, or had previously benefited from coping strategies other than taking prescribed psychotropic drugs. Input from prison mental health services was highly regarded, though considered too infrequent. Furthermore, patients perceived inadequate access to counselling, ‘talking therapies’ and other mental health professionals in prison needed to reduce reliance on medication.

‘In the long run I’d like not to take medication, but you have to in jail. They haven’t got a lot of resources, have they? It’s easier for them to give you the tablets then give you the long one year [CBT] course for everyone, they ain’t got the resources.’ (Patient 1)

‘That’s my big thing about the prison, is that they’re happy to give you lots of pills to just sort of treat you, rather than trying to get to the bottom of any problems that you may have… I was probably as good as I am now, when I was seeing psychiatrists and psychologists once a week, when I was sectioned, than I am now, seeing them once every blue moon, but yet on lots of medication.’ (Patient 9)

Sleep

Insomnia was a recurring theme during staff and patient interviews. Staff acknowledged that medicines could legitimately be prescribed to improve sleep during stressful times, such as the early period of custody or during court cases. However, there was concern that prisoners could misuse, sell or become dependent (physically or psychologically) on them. To minimise such risks, prescriptions for sleeping medicines (e.g. diazepam and zopiclone) were therefore usually limited to particular circumstances, for short periods. Though aware
of the reasons, some patients previously accustomed to taking such medicines complained about restricted access in prison:

‘I know it’s no good to be on long term, yeah, but I have it on short bursts and things like that. But you come here and they just slash it down, they cut you completely off it... I know a lot of people that do take diazepam just to get the buzz out of it, but I know a lot of people who genuinely need to be on a sedative.’ (Patient 3)

In addition to drugs prescribed specifically for insomnia, several patients claimed to feel ‘drowsy’, ‘sleepy’ or ‘tired’ after taking prescribed antipsychotics and antidepressants. Conversely, some patients experienced insomnia when they forgot, refused or were denied their medicines. Thus, sedative effects were not necessarily perceived negatively:

‘I feel the olanzapine [antipsychotic], when I have it, it doesn’t make it all go away. It reduces it, gets me to sleep early and go to sleep, wake up in the morning with a fresh mind. And it comes back again, but it helps.’ (Patient 4)

‘The days I don’t take them [antipsychotic], I don’t really sleep... I feel like something’s missing, feel like my day’s not going as well as it is.’ (Patient 7)

Some staff felt that the successful restriction of hypnotics and anxiolytics had increased pressure on doctors to prescribe other psychotropic drugs with sedating effects. As a security measure, certain medicines with sedative properties were administered under supervised conditions, often during daytime working hours. Under such circumstances, patients were more likely to view sedative effects negatively. With great frustration, one patient described feeling torn between his mental health and quality of life in prison:

‘At the moment, I’m arguing with them ‘cause they’re making me take it [antidepressant] at 5:30[pm], and I need it, so I’m getting bullied to take it at 5:30. ‘Cause if I don’t take it, I get depressed and if I do take it, by 6 o clock [pm], I’m asleep, so I’m having no value of life in this jail after 6 o clock.’ (Patient 1)

However, there were exceptions. One patient actively welcomed the ability to sleep though, and thereby avoid, the afternoons:

‘I just look forward to the time when I have my lunch, have my pills and go to sleep, so it’s avoidance again.’ (Patient 9)
Prison regime

Interviewees also discussed how psychotropic prescribing, via mental health (see Figure 1), impacted on the wider prison regime. Two subthemes were identified: rehabilitation and order.

Rehabilitation

Healthcare staff talked about the role of psychotropic medicines in supporting the rehabilitation of mentally ill prisoners and preparing them for reintegration into society. Firstly, prescribing regimens formed part of care packages, which enabled individuals to participate in work, education, offending behaviour programmes and other activities:

“They’ve complied with the treatment plan and a very positive impact, I would say, on their life here and some of them are now working in this establishment and they have the structure and socially functioning very well. Yeah, it does have a positive impact.’ (CPN 1)

However, some patients thought certain psychotropic medicines interfered with their ability to concentrate, which hindered participation in certain activities:

‘I do find that when I do education, I’m not as sharp as I as I normally am. You know, normally I can do crosswords and Sudoku puzzles and things fairly easily, but since I’ve been on a high dose of citalopram, you know, you can tell that they do have an effect on how the brain works and it sort of slows you down and things just take a little bit longer (. ) and harder to work out.’ (Patient 9)

‘Sometimes, if I fall asleep in education they tell me off. But I try not to fall asleep. (Patient 16)

Secondly, staff discussed how psychotropic medication regimes could be structured to prepare prisoners for release. This included permitting some prisoners to store and administer their medicines themselves ‘in possession’ (as it is known in prisons), rather than take them under supervised conditions. Whilst not appropriate for all patients (for example, those at risk of self-harm, misuse, trading, bullying or non-adherence), in others it could foster independence and responsibility:

“We need to empower our prisoners to take responsibility, as a [training prison], for their own medication needs because, you know, it won’t be spoon fed to them when they’re released. That’s what [training prisons] do, we prepare prisoners.’ (Healthcare Manager 1)
Generally, patients did not link taking medicines with preparation for release or rehabilitation. There was, however, one notable exception. One life-sentenced prisoner adhered to an antipsychotic medication regime with the explicit purpose of rehabilitation (and release) in mind:

‘I don’t even want that [medication], I don’t need it, but I’m just doing it to show that how I am, how responsible I am, how forward thinking, how far I’ve become within this prison sentence over so many years.’ (Patient 8)

Order

Staff and patients agreed that psychotropic medicines were linked with maintaining order in prisons. Reductions in behavioural problems were identified by healthcare staff among the benefits of appropriate prescribing, within broader care packages:

‘We got him started on medication and within a couple of weeks he was a different gentleman all together... running around playing football and mingling with other prisoners and he actually just sort of settled into the background and it was no problem at all, no management difficulties at all. We went to see him weekly and he was he was good as gold, you know, it works very well.’ (CPN 1)

Conversely, if left untreated, mental illness could have a disruptive influence:

‘Then, of course, it’s other prisoners that have to suffer with this guy running round the wing like a complete idiot shouting out and generally losing the plot, whereas if he took the medication he wouldn’t be behaving like that, so other prisoners suffer.’ (Patient 5)

Changes, delays or disruption in the supply of psychotropic medicines could trigger disorder. Incidents that had triggered considerable frustration and anger were described by patients, underlining the importance of effective medicines management arrangements to the functioning of the prison regime:

‘One of the main issues that crops up when they go round the wings is prisoners complaining that they’re not getting the medication that they think that they need from the doctor, or that medication’s been delayed. Obviously, those issues can escalate quite quickly, so if we’re, if the pharmacy isn’t running well and the prisoners aren’t getting their medication on time, that can have a huge impact on the general running of the prison.’ (Pharmacist 3)

‘Yeah, you do get pretty irritated, you find it difficult to handle it and they’re just not really not taking it seriously or just thinking you’re lying to them. Plenty of people shout and kick and scream and that, but it doesn’t get you anywhere at all.’ (Patient 10)
Healthcare staff emphasised that psychotropic medications should be prescribed on the basis of clinical need. Occasionally, however, doctors and mental healthcare staff experienced pressure from prison discipline staff to treat ‘difficult’ prisoners if, as one doctor put it, “it keeps the prison quiet”. Part of the problem, as it was perceived, was that discipline staff confused behavioural problems with mental illness. As one mental health worker explained:

‘Anybody shouts, abuses the officers, they must be mentally ill. That’s the perception ... They don’t see it as a behavioural problem. As it becomes a problem to them, they start to disturb the regime, they’re very quick to call us: ‘well, what are you gonna do for him?’ You go through the discipline route if there is no clinical need for us to see them.’ (CPN 4)

Doctors, and the mental health workers that supported them, did not advocate prescribing for purely behavioural reasons. Several staff expressed concern regarding the high rates of prescribing they had observed among prisoners:

‘If they’re depressed they can have stuff, if they’ve got serious mental health issues then they can have antipsychotic medication. You know, that’s fair enough, but giving people who haven’t got psychosis or haven’t got depression medication to knock them out, young men, why are we doing this? And we don’t.’ (GP 1)

**Discussion**

*Summary of main findings*

Psychotropic prescribing was thought to serve multiple purposes in prisons. Primarily, healthcare staff and patients viewed medicines as a means of improving mental health. Furthermore, patients relied on psychotropic medicines as a coping strategy and to reduce insomnia. Psychotropic medication, via improvements in mental health, was also linked to the wider functioning of the prison regime. There were, however, concerns among staff regarding possible overreliance on psychotropic drugs. Patients, for their part, perceived insufficient access to alternative forms of treatment and support.

*Strengths and limitations of the study*

By focusing on the purpose of psychotropic prescribing, this research adds to a growing field of research on prescribing practices and access to medication within prison healthcare (Bowen et al., 2009; Condon et al., 2007; Douglas et al., 2009; Hassan et al., 2012; HM
Inspectorate of Prisons, 2007). The thematic approach adopted allowed a detailed, yet accessible, exploration of psychotropic medication use in prisons, revealing areas of consistency and divergence between staff and patient perspectives. Nonetheless, different analytical approaches may have yielded alternative interpretations of the data.

Logistical and ethical constraints meant that selection of patient interviewees was mediated by prison mental healthcare staff. Whilst staff might have selected compliant, satisfied patients, it is encouraging that patient responses were neither uniform nor overwhelmingly positive, indicating otherwise. Furthermore, we only considered the perspectives of healthcare staff; other staff working in prisons (e.g. discipline staff) may have different views about the purpose of psychotropic prescribing. Finally, our findings may not be generalisable to prisons outside of the East of England, with different models of medicines management.

Comparison with existing literature

In some respects, the perspectives of prisoners in this study were broadly consistent with those of community-based patients. The role of psychotropic medication in reducing the symptoms of mental illness is well established. Similarly, coping has previously been identified as a theme in qualitative studies on psychotropic medicine taking (Rogers et al., 1998). However, we found that prisoners commonly relied upon the sedative effects of certain antidepressant and antipsychotic medications. In contrast, patients in the community more commonly viewed sedation as a negative side effect to be weighed against the positive benefits of symptom reduction (Rogers et al., 1998; Scottish Association for Mental Health, 2004).

Principally, two explanations have been proposed within the prison-based literature, which may explain the latter finding (RCGP, 2011). Firstly, due to a combination of situational, environmental and clinical factors, symptoms of insomnia are increased among prisoners (Elger, 2007). Secondly, many prisoners have a history of substance misuse (Fazel et al., 2006) and may be accustomed to taking prescribed or illicitly obtained psychotropic medications. Thus, medicines with sedative properties may be sought to ameliorate genuine or perceived clinical needs, or to be misused (RCGP, 2011). Nonetheless, it is notable that patients perceived few alternatives to psychotropic medicines in prison. These concerns are consistent with the wider prison mental health literature, which has noted
gaps in service provision, insufficient resources and high levels of unmet need in prisons (Brooker, 2005; Steel et al., 2007; Bradley, 2009).

Healthcare staff and, to a lesser extent, patients identified ways in which effective psychotropic prescribing supported the prison regime. Nonetheless, there were conflicts between the competing agendas of patients, healthcare professionals and discipline staff. Similar dilemmas have been noted elsewhere in the prison healthcare literature (Bowen et al., 2009; Hassan et al., 2012). As expected, there were no reports of psychotropic drugs being administered purely for disciplinary reasons. However, some healthcare staff perceived pressure to prescribe from prison discipline staff, who commonly confused behavioural problems with mental illness; a problem noted in the wider literature (Telfer, 2000). This could arguably be symptomatic of wider confusion regarding the role and function of prison mental health teams (Steel et al., 2007).

**Implications for future research or clinical practice**

In light of these findings, it may be worth considering whether better access to non-pharmacological alternatives to sedatives and other types of psychotropic medicines could be established in prisons, for prisoners with and without a formal mental illness. Indeed, in the prison mental healthcare literature there have been several calls to improve access to primary mental healthcare services and even non-health activities (Bradley, 2009; HM Inspectorate of Prisons, 2007). This strategy has been directly linked with reducing psychological dependency on psychotropic medications (HM Inspectorate of Prisons, 2007).

Furthermore, Primary Care Trusts and prisons should consider providing mental health awareness training for discipline staff and clarifying the role of prison mental health services. Measures such as these might reduce pressure on prescribers, and improve the quality of referrals to mental health teams, although robust evaluation would be essential.

**How this fits in**

Prisoners have high rates of mental illness; however, there have been concerns about the appropriateness of psychotropic prescribing and misuse of such medicines in prisons. In this qualitative study, patients and healthcare staff in prisons considered psychotropic medicines a valued means of treating mental illness, capable of influencing the wider functioning of
prisons. Nonetheless, staff were concerned about overreliance on psychotropic medicines, although patients perceived a lack of therapeutic alternatives. Improved access to talking therapies and other support mechanisms in prisons may be required if reliance on psychotropic medication is to be reduced.

Acknowledgements

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Table 1: Interviewee characteristics

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Figure 1: Staff and patient perspectives on the uses of prescribed psychotropic medication in prisons
6.2 Paper 4

Accounting for psychiatric medication changes in prisons: A discursive analysis of staff and patient perspectives

Hassan L, Edge D, Senior, & Shaw J.

Prepared for Social Science and Medicine
Abstract

Rates of serious mental illness are several times higher among prisoners than in the wider community. Prisoners are entitled to the same range and quality of healthcare services as they would expect in the wider community. Psychotropic medicines are widely used to treat mental illness in the community. However, people entering prison have often reported that prescribed psychotropic medicines have been changed or withdrawn, adding to their distress at an already difficult time. Drawing on three extracts from own larger qualitative dataset, in which patients and doctors were interviewed about the use of psychotropic medication in prisons, we undertook a detailed examination of accounts of medication changes in prison. Discursive psychological and Foucauldian discourse analysis techniques were used in combination to reveal how accounts were actively constructed, rather than neutral descriptions, designed to achieve social objectives. We show how patients used three related discursive strategies to organise their descriptions of medication changes in prison: they established entitlement to psychotropic medication, questioned the clinical judgement of doctors in prison and attributed negative outcomes to changes to medication regimes. In contrast, an account of a prison general practitioner demonstrated an effective defence to deal with patient complaints, demonstrating how debates about prescribing could be fought on grounds of clinical need, rather than replicating community practices. In summary, this paper shows how accounts of medication changes were discursively and rhetorically structured to allow participants to negotiate or deny access to medicines and orient to attributions of blame or responsibility. The wider implications for continuity and equivalence of care are discussed.

Keywords: prison, psychotropic, medicine, mental illness, discourse analysis, UK.
Introduction

Over 85,000 people are currently detained in prisons in England and Wales (Ministry of Justice, 2011c). Offenders are an unhealthy and socially excluded population, with high rates of mental and physical morbidity, substance misuse, homelessness and suicide (Fazel & Danesh, 2002; Pratt et al., 2006; Singleton et al., 1998; Social Exclusion Unit, 2002). The mental health of prisoners has received growing attention in recent years (Bradley, 2009; HM Inspectorate of Prisons, 2007). It is well-established that rates of serious mental illness are several times higher among prisoners than in the wider community; for example, a large meta-analysis of psychiatric surveys in western countries found that one in seven prisoners have psychosis or major depression (Fazel & Danesh, 2002). These rates, combined with the increase in the prison population, suggest there are more mentally ill people in prison than ever before (Bradley, 2009).

Arguably, imprisonment represents a public health opportunity to diagnose and treat mental illness in a socially excluded population, thereby reducing health inequalities (Reed & Lyne, 1997). Psychotropic medicines, such as antidepressants, antipsychotics and the benzodiazepines, are widely used in the community to treat mental illness. However, the equity, safety and appropriateness of prescribing for mentally ill prisoners have recently been questioned (Bowen et al., 2009; Hassan et al., 2011b; HM Inspectorate of Prisons, 2007). One difficulty prisons face is the management of security and safety risks associated with prescribed medications in a secure environment. In prisons, there are longstanding concerns that certain psychotropic medicines are susceptible to illicit use or abuse (RCGP, 2011). Under these circumstances, doctors working in prisons are placed in a difficult position, facing conflicting pressures from prisoners and the establishment, influencing prescribing decisions.

In this paper, we aimed to examine accounts of prescribing decisions that led to reduced access to psychotropic medications in prison. Following a review of current discourses influencing prison mental healthcare, we outline our dually-oriented discursive approach, which combines insights from both discursive psychology and Foucauldian discourse analysis. Then, focusing on key interview extracts from a larger qualitative dataset, we proceed to identify the discourses, subject positions and rhetorical devices used to frame psychotropic prescribing decisions in prisons and to orient to attributions of blame or responsibility.
The principle of equivalence

Prisoners should have access to the same range and quality of services as they would expect in the community (HM Prison Service and NHS Executive, 1999). Previously, healthcare services for prisoners in England and Wales were managed by the Prison Service, separately from the wider community. However, some argued that prison amounted to ‘double punishment’, bringing psychological and physical distress in addition to deprivation of liberty (Sim, 1990). As a result of increasing pressure to improve the quality of care, in line with the community, in 1999 a joint working group made a series of recommendations which set in motion plans to bring responsibility for prison healthcare within the NHS (HM Prison Service and NHS Executive, 1999). In April 2006, the transfer was completed and the NHS assumed financial and commissioning responsibilities for prison healthcare.

Yet, for many reasons, equivalence of care appears to be especially difficult to achieve in mental health (Niveau, 2007). There is widespread concern that prisons may have a detrimental impact on mental health, heightening vulnerability and increasing the risk of self harm and suicide. In recent years, there have been increasing calls to consider non-custodial alternatives for vulnerable groups, including people with mental illness (Bradley, 2009). In 2001, Changing the Outlook announced mental health ‘in-reach’ teams (Department of Health & HMPS, 2001), to treat prisoners with serious mental illness. Unfortunately, despite modernisation of prison mental health services, detection rates for mental illness remain unacceptably low (Shaw et al., 2009c). Thus, all too often the opportunity to “detect, diagnose and treat mental illness in a population hard to engage with NHS services” is lost (Reed & Lyne, 2000).

Medicines management for mentally ill prisoners

Mental health policy for prison-based services clearly states that medication for mental disorder should not be automatically withdrawn on entry into prison without proper clinical assessment (Department of Health & HMPS, 2001). However, research indicates there are problems with access to psychotropic medicines in prisons. In qualitative studies, prisoners have frequently reported that psychotropic medicines previously prescribed to them in the community were withdrawn on entry into custody, adding to their distress at an already
vulnerable time (Bowen et al., 2009; Douglas et al., 2009). Furthermore, a recent study confirmed that half of all psychotropic medicines reported on arrival into custody were not prescribed in prison, often without justification recorded in the notes (Hassan et al., 2011b). Conversely, others have expressed concern that psychotropic medicines may be overused in prisons, in comparison with non-pharmacological interventions, such as ‘talking therapies’ (HM Inspectorate of Prisons, 2007). The confusion in this area is further compounded by a lack of access to robust prescribing data. Unlike the community, high quality prescribing data are not routinely available from prison based prescribers (Department of Health, 2003b).

Part of the problem is that prescribing in secure environments involves a complex balance of health and security needs. Some prescribed psychotropic medicines, particularly those with sedating or euphoric properties, can be misused and carry value in prison. Thus, staff commonly believe that a minority of prisoners may present with exaggerated or fictitious symptoms to attempt to acquire medication to misuse or sell (Hassan et al., 2012; RCGP, 2011). This presents a number of safety and security risks, both to individuals taking illicitly obtained medicines and to vulnerable individuals with genuine mental health needs, who may come under pressure to share prescribed medication with others. Recent guidance on prescribing in prison issued by the Royal College of General Practitioners (RCGP) has argued that the principle of equivalence, while fundamental, “does not imply ‘sameness’” (p.7) and aspects of medicines management arrangements used in the wider community may need to be adapted in prisons in order to mitigate risk (RCGP, 2011).

**Patient or prisoner?**

In summary, access to psychotropic medication in prison is a particularly controversial and challenging area, with tensions between policy and practice (Bowen et al., 2009). Prescribers working with mentally ill prisoners, whilst remaining mindful of the particular risks within a secure setting, have to work within the policy context of equivalence of care. Meanwhile, the disingenuous intentions of a minority of prisoners complicate the process of continuing prescriptions for those genuinely in receipt of psychiatric medication. To quote an ex-prisoner, ‘not all prisoners are addicts or skivers, yet we are treated as if we are’ (Mellor, 2003). Thus, prisoners may have to repeatedly demonstrate their entitlement to access psychotropic medicines in an environment where prescriptions are frequently contested, renegotiated or withdrawn. This raises an interesting set of questions, with
important implications for access to psychotropic medicines in prison: under these circumstances: a) how do prisoners and healthcare staff account for differences in access to psychotropic medicines between prisons and communities; b) which discourses do they draw upon; and c) how do they position themselves and others in their accounts?

Accounts

An account has been defined as, ‘an interpretive and justificatory discourse, the topic of which is a social interaction’ (Harré, 2001 p.700). Accounts can be regarded as complex social productions, which occur whenever conduct is perceived to be problematic or falls short of expectations. Firstly, they often contain claims about how acts should be interpreted, and regarding blame and responsibility for actions. Furthermore, accounting itself is a social action (Harré, 2003). Thus, from a discursive stance, how people represent themselves and others, and their experiences of prescribing decisions in prison should be regarded as active accounts, rather than neutral descriptions, designed to accomplish particular social actions, such as complaining, attributing responsibility, or justifying.

Analytical approach

In this paper, we used a version of discourse analysis, rooted in a social constructionist perspective, to deconstruct patient and doctor accounts of reduced access to psychotropic medications in prison. Although there is a body of discourse analysis research in psychiatry, much of this has been focused on diagnostic categories within mental illness, such as schizophrenia (Harper, 1999a; Meehan & MacLachlan, 2008; Tucker, 2009). Fewer have focused specifically on the issue of medicines used to treat mental illness using a discursive approach (Harper, 1999b). From a purely biomedical perspective, medicines could simply be viewed as physical objects or chemical compounds. From a discursive perspective, however, concepts such as ‘medicine’ are socially constructed and only derive meaning in language, relative to other words or concepts, such as vitamins, drugs or foods. To quote the semiologist de Saussure: “in language there are only differences” (De Saussure, 1972 p.118). Furthermore, decisions about the prescription, consumption and evaluation of medicine use are predominantly accomplished via interaction. Thus, it seems logical to examine psychotropic prescribing in prisons as a social, interactive practice without necessarily passing judgment on which version should be regarded as ‘reality’.
The particular analytical approach we used in this paper combines insights from both discursive psychology and Foucauldian discourse analysis. Whilst, traditionally, these might be considered distinct genres, others have argued that the two can be combined (Harper, 1999b; Seymour-Smith et al., 2002; Wetherell, 1998; Willig, 2008). In this study, we draw on the theory and methods of discursive psychology (Edwards & Potter, 1992; Potter, 1996; Potter & Wetherell, 1987) as our first layer of analysis. Discursive psychology is strongly influenced by conversation analysis principles (Edwards & Potter, 1992; Hutchby & Wooffit, 1998; Sacks, 1992) and essentially, builds from three core concepts: construction, action orientation and situation (Potter & Hepburn, 2005a; Wiggins & Potter, 2008). Firstly, discourse is both constructed and constructive; far from being a neutral descriptor of our actions social and worlds, we use language to actively construct them. Secondly, discourse is action-oriented; language is constructed in particular ways to achieve certain effects. Thirdly, discourse is context-dependent and situated within a specific sequential interaction, social setting and environment.

Our second layer of analysis is influenced by Foucauldian discourse analysis (Davies & Harré, 1990; Harré, 2003; Parker, 1994; Willig, 2008). Using this approach, we seek to identify the wider institutionally, historically and culturally embedded ‘discourses’ that participants draw on to produce accounts of access to psychotropic medicines in prison, for example notions of equivalence of care and medical power. From a Foucauldian perspective, these societal-level discourses help to construct both objects and an array of ‘subject positions’ (Parker, 1994). Subject positions (e.g. patient, prisoner or father) can be used to construct identities (Davies & Harré, 1990). According to Harré, in adopting a subject position we momentarily assume “a certain cluster of rights, duties, and obligations with respect to what sorts of things a certain person, in that position, can say and do” (Harré, 2003 p.697). Thus, discourses offer ways of seeing and being (Willig, 2008); in turn, these control what can be said and done and are closely implicated in how power is exercised. It is important to emphasise that subject positions are discursive accomplishments and are, by nature, ephemeral; they can be revised, challenged, exploited or discarded during the course of social interaction (Harré, 2003). In this study, we seek to identify how particular subject positions are constructed or undermined and the implications for access to psychotropic medication in prison.

To summarise, in the arena of prisons and medicines, where motives for wanting to acquire psychiatric diagnoses and medicines can be contested, a discursive approach is
advantageous: it allows us to deconstruct how people represent themselves and their experiences, without passing judgment on which version should be regarded as ‘reality’. Using a two-sided discursive psychological/Foucauldian approach enables us to examine the rhetorical strategies used to structure accounts in the immediate context of the interaction, whilst acknowledging the wider matrix of discourses that inform and contextualise prescribing talk in prisons, and the implications for access to psychotropic medicines.

Participants

The data extracts used as part of the current study are taken from a larger qualitative dataset. In the larger project, the first author interviewed patients and healthcare staff to gain perspectives on psychotropic prescribing in prisons. Interviewees were recruited from four medium-sized English prisons (300-1000 prisoners) and were interviewed between August 2010 and May 2011. Staff (n=16) were selected using a combination of purposive and snowball sampling techniques to include a varied range of roles (and therefore perspectives) and prescribing including GPs, primary and secondary mental healthcare staff and pharmacists. A purposive sample of 17 patients was also recruited (13 men and four women, aged 19-52), with the help of prison mental healthcare staff, who reviewed clinical records and made the initial approach to patients. All patients subsequently interviewed had prior contact with prison mental health services and had experience of taking prescribed medication for mental health problems, such as antipsychotics, antidepressants, hypnotics and anxiolytics.

Interviews were semi-structured in nature, lasting 30 minutes on average (range 14-59 minutes). Topic guides were used to ensure key issues were addressed, but with sufficient flexibility to enable participants to introduce novel topics and tell their stories in their own way. Patient interviews covered current and previous medication arrangements, concordance with medication regimes and relationships with doctors and healthcare staff. Staff interviews covered medicines management arrangements, factors influencing prescribing decisions and relationships with patients and other healthcare staff. All participants took part in the study on a voluntary and confidential basis, on the understanding that participation would not affect their healthcare, legal rights, parole prospects or career progression. Ethical and management approvals for the study were given by Northern and Yorkshire Research Ethics Committee (Ref: 09/H0903/54), the
National Offender Management Service and the NHS and management organisations responsible for healthcare at each prison.

Selection and analysis of extracts

A thematic analysis of the full interview dataset has been reported elsewhere (Hassan et al., submitted24). Thus, interviews had already been transcribed (orthographically), checked against audio recordings for accuracy and imported into NVivo (version 8, QSR International Pty Ltd., 2008) for coding. For the purposes of the current study, we sought to focus on a specific, empirically interesting, type of phenomena: accounts of blame or responsibility pertaining to reduced access to prescribed medications in prison (i.e. medication withdrawal, and/or dose reduction), which patients perceived as problematic. NVivo was used to identify (code) all instances where descriptions of events that fitted these criteria were discussed, either by patients or healthcare staff. Subsequently, three extracts were selected for a more detailed discourse analysis. Two extracts were taken from interviews with patients; the third was taken from an interview with a GP. These extracts were selected because they were deemed key examples, interesting and analytically rich from a discursive perspective. They were not chosen because they were viewed as representative or exceptional. Indeed, one possible question for future research might be to establish the extent to which the discourses and rhetorical strategies identified in these extracts are used elsewhere, by other speakers.

Extracts were transcribed in greater detail, using a simplified version of the Jeffersonian system (Hutchby & Woofit, 1998 see Appendix for transcription key), in order to capture additional non-verbal features of speech considered important in discourse analysis (e.g. pauses, stresses and intonation). The three extracts, including interviewer comments, were subjected to a detailed discourse analysis. A Foucauldian-influenced approach was used to identify the discourses participants drew upon to construct accounts and the subject positions utilised within them. Principles of discursive psychology were used to demonstrate how accounts, rather than being neutral descriptions of events, were discursively and rhetorically constructed to produce particular effects, legitimise particular versions and interpretations of events and to undermine others. In the following analysis, patient and staff perspectives will be considered in turn.

24 See paper 3 (section 6.1)
Patient perspectives

In this section, two key extracts are analysed in which patients recount problems in accessing medicines for mental illness in prison, which they had previously been prescribed in the community. We will show how these seemingly neutral descriptions were in fact rhetorically structured to justify entitlement to psychotropic medication and highlight problems with prescribing practices in prison. Specifically, we identified four discursive strategies within patient accounts: establishing entitlement to psychotropic medication in prison; questioning the clinical judgement of doctors working in prison; highlighting communication problems; and attributing negative outcomes to changes to medication regimes. Combinations of these four strategies were used to produce complaints designed to position patients as recipients of substandard care.

Establishing entitlement to psychotropic medication

Patients established their entitlement to psychotropic medication in prison by drawing on the ‘equivalence of care’ discourse; that is the right to equitable standards of healthcare inside and outside of prison (HM Prison Service and NHS Executive, 1999). A typical example is provided in extract 1, below. A participant receiving medication for bipolar disorder has just explained the link between withdrawal of medication in prison and his self-harming behaviour when he draws on a particular incident to illustrate his point.

Extract 1 – taken from interview 13 with a male patient

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<td>1</td>
<td>P:</td>
<td>when I first got here I came into the jail on gabapentin which is a medication</td>
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<td>2</td>
<td>I:</td>
<td>yeah</td>
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<td>3</td>
<td>P:</td>
<td>I was on them out there by the doctor .hh went to the hatch one day to go and get</td>
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<td>4</td>
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<td>my medication (.) you’re not on them anymore (.) I’m like what (.) what do you</td>
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<td>5</td>
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<td>mean I’m not on them anymore (.) I said I’m on them on the outside (.) of course</td>
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<td>6</td>
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<td>I’m on them where are they (.) and they’re like er (.) no well in here they’ve had a</td>
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<td>7</td>
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<td>look and they’ve the doctor’s took you off them</td>
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<td>8</td>
<td>I:</td>
<td>without seeing you?</td>
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<td>9</td>
<td>P:</td>
<td>and I’m like (.) well hang about (.) correct me if I’m wrong but ain’t a doctor</td>
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<td>10</td>
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<td>supposed to see you to diagnose you before he starts messing about with</td>
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<td>11</td>
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<td>medication (.) and then er we don’t know that’s just the way it is (.) so straight</td>
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<td>12</td>
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<td>away I was like put in an app to see the doctor and now luckily that got sorted but</td>
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<td>13</td>
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<td>that’s the kind of that’s the kind of example of (.) what happens you know (.) and</td>
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<td>14</td>
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<td>then (.) you don’t know it could be someone who [smacks hands together] that’s</td>
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<td>15</td>
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<td>the final straw (.) yknow (.) I’ve seen enough death to last me</td>
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The participant begins the story by making repeated reference to having previously been on prescribed medication in the community, prior to his imprisonment (lines 1 and 3). This can
be regarded as ‘scene-setting’, highlighting relevant information and preparing for the attributions which follow. He goes on to portray the day of the incident as ordinary and indistinguishable from any other ("one day"); no irregularities are noted, therefore there is no reason to expect anything different. Establishing this sense of normality is key to introducing the unexpected and avoiding any blame personally. On being informed his prescription had been discontinued, his retort (line 5) serves to reinforce the connection between his right to medication in prison and prescriptions received outside of prison. Notably, the participant uses ‘active voicing’, formulating information to be heard as reported talk, to convey the nature of the interaction that took place. Though it is unlikely those words were actually said in that way, active voicing functions rhetorically to increase the creditability and force of his account, making it more difficult to question (Hutchby & Woofit, 1998).

Questioning the clinical judgement of doctors working in prisons

A second tactic used by patients to highlight problems with access to psychotropic prescriptions in prison was to question the clinical judgement of doctors in charge of their care. In extract 1, the doctor’s decision to discontinue the patient’s prescription is trivialised as “messing about”, inferring practice which fell short of expected professional standards. By confirming the doctor did not see him before making a decision (line 10), the patient also neutralises the alternative possibility that medication could have been withdrawn for clinical reasons, based on observations or reported symptoms.

In situations where contact did take place between patients and doctors, different strategies were required to question clinical judgements. In extract 2, a female patient receiving antipsychotic medication is invited to describe how the dosage of her medication came to be reduced in prison, against her wishes. In her explanation, she breaks off briefly to clarify the type of the doctor who made the decision; ‘a GP not a psychiatrist”. In deploying certain subject positions (e.g. GP, friend, father), speakers inevitably invoke particular images, categories and rights (Davies & Harré, 1990). The word ‘psychiatrist’ constitutes a particularly explicit, institutionally regulated type of subject position associated with specialist knowledge and skills pertaining to mental health. Thus, with a single word, the participant efficiently invokes images of a highly qualified medical professional, whose power and superiority in the context of psychotropic medication would be difficult to contest, even by other health professionals with prescribing entitlements (including GPs).
Whether or not the original prescription was clinically appropriate is neither apparent nor relevant. What is significant about this example, however, is how by making contrasts between the supposed expertise of different types of doctors, the participant’s comment uses the force of the ‘psychiatrist’ subject position to cast doubt on the entitlement of the GP to change the prescription, whilst simultaneously undermining an alternative interpretation of events that her prescription was altered appropriately.

Extract 2 – taken from interview 15 with a female patient

| I | so when you came in (.) ho-how did it come to be dropped (.) I know that’s a while ago |
| P | cos they just don’t – when I came in the doctor said er he couldn’t understand – this was a GP not a psychiatrist – couldn’t understand why I was on such (.) heavy doses (.) of medication |
| I | did they have your records or any information about you to make the decision? |
| P | yes they’d got it back they’d got it back from my doctor my doctor had confirmed the doses I was on (.) and why I was on them (.) so I don’t understand why they did that |
| I | ok |
| P | cos ever since I’d been quite ill I mean I’m a regular self-harmer I have an ACCT book erm (.) I’ve been on that since I came in I’ve been on suicide watch quite a few times since I came in .hhh |
| I | yeah |
| P | I spent 8 months in the separation and care unit (.) erm (.) because my behaviour was so up and down I was really poorly (.) erm and I’m due to be moved soon to the [DSPD unit] in [anonymised] prison |
| I | oh yeah? mm hmmm |
| P | to try and help me (.) because I have 3 different mental health disorders |

Communication problems

Patients also highlighted problems with communication in the context of prescribing decisions. In extract 1, the patient describes how the decision to discontinue his medication was communicated to him not by the doctor, but by healthcare staff at the hatch (lines 3-7), where prisoners queue to collect their prescribed medicines. Notably, the patient reports being given no explanation for this decision. Healthcare staff at the hatch deflect responsibility for the decision onto the doctor (line 7), thereby neutralising any suggestions of blame. Further protests are then closed down (“we don’t know, that’s just the way it is”), as are any potential queries the interviewer may have had. According to his account, in this case there is no opportunity for the patient to understand the reasons for, much less be involved in, this prescribing decision. Similarly, in extract two the patient expresses a lack of
understanding regarding the reasons for the medication change (lines 8-9). Thus, regardless of the outcomes of prescribing decisions and the level of satisfaction with them, within patient accounts there is the suggestion of communication failures between prescribers, patients and healthcare staff.

Attributing harmful consequences to medication changes

Participants attributed a variety of negative health outcomes to changes in medication, including mood swings, anxiety, insomnia, self-harm and thoughts of suicide. In extract 2, the participant is asked about the circumstances in which her prescription was changed (line 1); an invitation to do some ‘remembering’. After establishing her incomprehension of the decision to reduce the dose of her medication, she goes on to describe a range of symptoms and indicators of mental illness “ever since”; in addition to acting as a descriptive temporal marker, this phrasing subtly frames her subsequent illness as a consequence of the prescription change. Initially, a three-part list is formulated to evidence her increased risk of suicide – “regular self-harmer”, “ACCT book25 and “suicide watch” - demonstrating both the chronicity and severity of risk to life. She then cites two types of special residential care arrangements to which she has been subject (lines 15-17). Two interesting features about this list stand out. Firstly, the list mostly features interventions that would be instigated by, or at least involve the cooperation of, members of staff. This increases the objectivity of the account, in a way that reporting only symptoms would not, thus effectively managing any dilemma of stake (Edwards & Potter, 1992); that is the notion that her account might be dismissed as a product of the speaker’s stake or interest in a particular version of events. Secondly, the residential care arrangements are explicitly linked with her mental illness; a stay in the separation and care unit, “because...I was really poorly”; and a prospective move to a specialist personality disorder facility, ”because I have three different mental health disorders”. It is interesting that these are singled out for special treatment, particularly as: a) prisoners are usually transferred to the care and separation unit (also known as the segregation unit) as punishment for disciplinary offences; and b) there has been significant debates in the wider clinical literature about whether personality disorders should be regarded as mental illness or whether they are amenable to drug treatment (Kendall, 2002).

Whatever the intentions of the patient, the rhetorical effect of this strategy is to undermine

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25Assessment, Care in Custody, and Teamwork (ACCT) are procedures for prisoners identified to be at risk of self-harm or suicide. Care plans are recorded in files known as ‘ACCT books’.
the possibility that her problems could be viewed as purely behavioural, rather than related to mental illness.

In extract 1, the patient reports that his original prescription was later reinstated. Thus, in contrast to extract 2, slightly different discursive work is necessary to link withdrawal of medication with negative health outcomes. Firstly, whilst he could have attributed the successful outcome to his own proactive action (i.e. making an appointment to see the doctor), he puts it down to luck (line 12), suggesting the situation could have turned out differently. Secondly, he characterises his story as representative, as ‘the kind of example of what happens’, rather than an isolated incident. Thirdly, by using the word ‘death’, he alludes to notions of suicide. This encourages the listener to take the incident seriously, especially in the context of wider social and institutional discourses expressing concern regarding the elevated risk of suicide in prisons (Fazel et al., 2005a; Shaw et al., 2003), and also the more specific context of the interview in which the patient had previously disclosed his propensity to self-harm. This latter aspect makes the account especially difficult to challenge, at least without risk of appearing insensitive. In combination, these three elements function to increase the perceived frequency of medication withdrawal in prison and the risk of resultant harm. Furthermore, the account is constructed in a way that prevents it from being trivialised, dismissed or challenged.

A GP perspective

The previous section showed how patients constructed multi-layered accounts, designed to position themselves as recipients of inequitable care, placed at significant risk of harm. In the context of such powerful discourses, how can doctors justify differences in prescribing practices between prison and the community?

Extract 3 opens midway through a discussion between the interviewer and a GP about patient involvement in prescribing decisions in prisons. In response to a challenge by the interviewer, the GP demonstrates a counter-argument oriented to defend against patient accusations of inadequate healthcare. This extract will form the basis of the subsequent analysis in which we identify three principal discursive strategies that form a powerful defence against patient complaints: highlighting problems with prescribing practices in the community; emphasising prescribing on the basis of clinical need for medication; and a team approach. Used in combination, these discourses form the basis of a sophisticated account designed to legitimise decisions to discontinue psychotropic medications in prison and
deflect potential accusations of substandard healthcare. We also identify a fourth discourse, focused on the diversion of medication, which is notable because it is incomplete.

**Extract 3** – taken from staff interview 4 with a male GP

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<tr>
<td>1</td>
<td>P:</td>
<td>the idea that people can have whatever drugs they want in prison is not something</td>
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<td>2</td>
<td>I:</td>
<td>which society would feel happy with. (.) they wouldn’t would they? (.) you know</td>
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<td>3</td>
<td>p:</td>
<td>no (.) but at the same time I’m thinking there because (.) we have this idea of</td>
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<tr>
<td>4</td>
<td>I:</td>
<td>equity of care drummed into us if they got it outside there’s this kind of sense that</td>
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<tr>
<td>5</td>
<td>p:</td>
<td>they’re entitled to it inside</td>
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<tr>
<td>6</td>
<td>P:</td>
<td>that th – well that is certainly their wa-where their starting point (.) is well I get this</td>
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<tr>
<td>7</td>
<td>I:</td>
<td>on the outside so why can’t I have it in here (.) and I’ve just had to address a</td>
<td></td>
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</tr>
<tr>
<td>8</td>
<td>complaint today where someone wanted their temazepam (.) out there</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>9</td>
<td>I:</td>
<td>yeah</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>10</td>
<td>P:</td>
<td>well they got it out there and they come in here and they don’t get it well why</td>
<td></td>
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</tr>
<tr>
<td>11</td>
<td>I:</td>
<td>don’t they get it well in fact there’s no (.) temazepam is not licensed for long-term</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>use</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>P:</td>
<td>yeah</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>I:</td>
<td>and the reason why they get it out there is that th: doctor’s intimidated into</td>
<td></td>
<td></td>
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<tr>
<td>15</td>
<td>prescribing it (.) it’s not worth their while to make a stand (.) whereas they</td>
<td></td>
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<tr>
<td>16</td>
<td>come in</td>
<td>here and I’m not prescribing temazepam because it gets (.) it gets er (.) diverted all</td>
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<td></td>
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<tr>
<td>17</td>
<td>over the wing so I’m not going to give it’s a hassle having to give it see to take .hhh</td>
<td></td>
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<td></td>
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<tr>
<td>18</td>
<td>and it’s not in fact necessary (.) it doesn’t benefit people in the long term if they’re</td>
<td></td>
<td></td>
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<tr>
<td>19</td>
<td>depressed they can have stuff (.) if they’ve got serious mental health issues then</td>
<td></td>
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</tr>
<tr>
<td>20</td>
<td>they can have erm antipsychotic medication you know that’s fair enough but .hh</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>21</td>
<td>giving people who haven’t got psychosis or haven’t got depression medication to</td>
<td></td>
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<td></td>
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</tr>
<tr>
<td>22</td>
<td>(. ) knock them out young men why are we doing this? (.) and we don’t (. ) so I feel</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>23</td>
<td>quite strongly that we shouldn’t and that’s the team approach that we take here</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>24</td>
<td>so we don’t prescribe this medication</td>
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</table>

*Questioning prescribing practices in the community*

A key strategy used to justify denial of access to psychotropic medication in prison was to question the quality of prescribing in the community. In extract 3, the GP introduces a recent complaint by a newly received prisoner as an example to illustrate his point (lines 7-8). Given that the conversation preceding this point (and prior to the extract) has dealt with psychotropic medicines in general, the choice of example is interesting. The particular psychotropic drug concerned is temazepam, which belongs to the benzodiazepines and (as the GP reasons) are only indicated for the short-term relief of anxiety that is “severe, disabling, or causing the patient unacceptable distress” (BNF, 2010). This example serves to illustrate how a decision to prescribe a medicine previously received in the community could, if it contravened accepted prescribing guidelines, be inappropriate. Ostensibly, the example is chosen on grounds of recency, the complaint having been addressed earlier that day (line 7). It is, however, significant that the drug in the example selected belongs to the
benzodiazepines, which are well known for their dependence and abuse potential. Indeed, since the 1980s there have been well-publicised campaigns to reduce benzodiazepine prescribing in the community (National Prescribing Centre, 2005a). Furthermore, unlike other benzodiazepines like chlordiazepoxide, which may be prescribed with caution in prisons (usually for detoxification purposes in alcohol dependence), temazepam in particular has been singled out as inappropriate due to unacceptably high potential for misuse and harm (RCGP, 2011). Thus, choosing an example concerning discontinuation of this particular drug, rather than an antidepressant or antipsychotic for example, strengthens the argument presented, possibly in anticipation of a potentially non-sympathetic hearing.

Questioning community practices may be considered an effective discursive strategy; by highlighting the gap between evidence-based standards and practices in the community, the choice of reference standard for equity of care is discredited. Notably, the suggestion that community GPs are intimidated into prescribing is offered (line 15). Overall, this line of argument neutralises the need for prisons to simply replicate community prescribing practices, therefore justifying differences in prescribing between prisons and communities, and defending against the criticism that prisons provide substandard care.

Emphasising prescribing on basis of clinical need for medication

A second discourse used to account for changes in medication on entry into prison was to question clinical need for medicines. In extract 3 the GP suggests that, for one reason or another, individuals who take psychotropic medicines may not necessarily have a mental illness (lines 19-23). If there is no mental illness, the likelihood of there being a clinical need for psychotropic medicines is reduced. In this manner, both claims to medication and accusations of substandard care are deflected.

Simultaneously, liberal attitudes to prescribing in prisons are portrayed as unprofessional and non-therapeutic. In suggesting that medicines may be prescribed to sedate young men, or “knock them out”, GP draws on a controversial historical discourse. Indeed, in the past, critics of prison healthcare and patient pressure groups questioned whether drugs were prescribed in prisons for disciplinary purposes, to control difficult individuals rather than treat mental illness (Sim, 1990). Furthermore, claiming that psychotropic medicines have no long-term benefit (line 19) for conditions not considered “serious” discourages prescribing for sub-threshold symptoms. Significantly, and in contrast to patient accounts, it also undermines the notion that failure to prescribe could result in significant danger or
harm to patients. Thus, under these circumstances, prescribing is repositioned as an immoral and oppressive act that is not to be tolerated.

**A team approach**

A third discourse we detected was that of ‘the team’. Initially in extract 3, the GP uses the singular personal pronoun ‘I’ when accounting for his refusal to prescribe temazepam (lines 17-18). Later in the extract, however, he switches to the plural form (‘we’), which is used five times in quick succession (lines 23-25). The effect of this pronoun shift is to emphasise a collective, rather than individual, identity (Sacks, 1992).

Group membership would appear to offer a certain advantages when accounting for prescribing decisions. In this extract, the GP makes reference to a “team approach” (line 24). Teams are a specific, particularly positive type of group formulation with a sense of unity, shared purpose and mutual accountability; all teams are groups, but not all groups are teams. Under certain circumstances, it is plausible that group membership could be used to dilute individual accountability for decision making. However, in espousing a team approach and claiming to speak on its behalf, the GP gives the impression his decisions are aligned with, and supported by, other members of the group, thereby strengthening his position. Notably, refusal to prescribe temazepam is framed as a blanket policy (“we don’t prescribe this medication”). Framing refusal on the grounds of the medication, rather than the individual is an example of what Walter et al. (2012) describe as a ‘depersonalisation strategy’, which functions to deflect tension from the doctor-patient relationship.

**Safety and security?**

The account reported in extract 3 is also interesting for the arguments which are absent; in other words, what is said is as important as what is not said (Billig, 1991). At one point, the GP cites the risk of diversion of medicines as a reason for not prescribing in prison (lines 14-16). However, this line of argument is only partially followed. Given the emphasis in the wider literature on security and safety risks associated with diversion of medication in secure environments, and the specialised policies developed to mitigate against risks, this is interesting (RCGP, 2011).
The argument is initially introduced (line 14), followed by an acknowledgement of the “hassle” involved in introducing interventions to prevent diversion, for example prescribing medicines for supervised consumption (also known as ‘see to take’ medicines in prisons). It seems this could plausibly introduce further discussion about the security and safety issues associated with diversion of medicines in prisons. However, the speaker proceeds to reframe clinical need for medicines as the primary concern (line 16). The phrase “in fact” marks the point at which the discussion is cut short. “In fact” is an adverbial phrase with several potential meanings (Defour et al., 2010); in this context we would argue that it is used in an additive sense, to convey a more precise formulation of the utterance immediately before. Thus, whilst not strictly discursive ‘repair work’, in its usual definition (Schegloff et al., 1977), it could still indicate some degree of self-correction on the part of the speaker. Such an interpretation fits well with Schwenter and Traugott’s observation that the phrase signals that “what follows is a stronger argument than what precedes, with respect to the speaker’s rhetorical purpose at that point” (2000 p.12). Thus, whilst safety and security discourses would appear to be obvious and readily available discourses to draw upon, it appears that, on this occasion, clinical need is considered a much stronger argument.

Conclusions

In this study, we focused on patient and doctor accounts which related to the withdrawal or reduction of psychotropic medicines in prison. We found that patients used four related discursive strategies to organise their descriptions of medication changes in prison: they established entitlement to psychotropic medication, questioned the clinical judgement of doctors in prison, highlighted communication problems and attributed negative outcomes to changes to medication regimes. These descriptions drew on well-established prison health policy discourses, namely equivalence of care and suicide prevention, and were rhetorically structured to increase the creditability and objectivity of their accounts. The effect of this was to produce well-organised complaints about medication changes, which positioned themselves as recipients of substandard care. Nonetheless, though patients’ complaints were well-executed, our analysis of the GP’s account showed that, even under these difficult conditions, it was possible to mount an effective defence to deal with patient complaints. In espousing a team approach and foregrounding the presence of mental illness as the deciding factor in prescribing, the GP account demonstrated how debates about
prescribing could be fought on grounds of clinical need, rather than replicating community practices.

According to Davies and Harré, identity is not a fixed, cognitive entity; rather who we are is “always an open question with a shifting answer” (1990 p.46) depending on the subject positions made available within talk and interaction. Perhaps then, the question is not necessarily whether or not mental illness is present, or whether individuals should be considered prisoners or patients, but the discursive effects of such labels. Arguably, the participants in this study could have debated appropriateness of prescribing decisions with less emphasis on patient status or diagnoses of mental illness. One possible reason for the importance placed on ‘identity work’ we observed in this study may be the implications for accountability, management and care. Decisions about offender healthcare are made in the context of wider societal discourses about criminal justice policy, the economy and which groups are most ‘deserving’ (Senior & Shaw, 2011). Potentially, psychiatric diagnoses can have a significant influence, not just on access to psychotropic medication, but on the settings in which offenders are treated (e.g. prison or hospital), their perceived accountability for offences and sentencing. Therefore, subject positions and labels might have added importance in criminal justice settings.

In this study, we revealed how questioning community prescribing practices could undermine the choice of reference standard against which prison healthcare should be judged. Although this could be an isolated example, it could indicate that health professionals orient differently to the equivalence debate compared with patients, some of whom may equate equivalence with ‘sameness’. Although equivalence has been a useful reference point for driving forward modernisation in prison healthcare, its ongoing utility has been questioned, not least because prisoners may require higher standards of care beyond those provided in the wider community to reduce health inequalities (Exworthy et al., 2011; Lines, 2006; Niveau, 2007). In addition to deflecting accusations of inequitable care, aspiring to exceed rather than mirror community standards of healthcare repackages differences between community and prison healthcare as signs of progress, rather than inequity. Indeed, recent longitudinal studies have demonstrated that, in a large proportion of people, psychiatric symptoms actually improve in prison (Blaauw et al., 2007; Hassan et al., 2011a; Taylor et al., 2010), contradicting the received wisdom that prison has a detrimental impact on mental health.
Patients in this study reported that changes to medication were made without adequate explanation and with distressing consequences. In this respect, our findings echo those of previous qualitative studies (Bowen et al., 2009; Douglas et al., 2009), suggesting communication problems between prescribers and patients in prison. Mutual involvement in decision making and information sharing between prescribers and patients appeared, from the patient perspective, to be inadequate. Yet, these are pre-requisites for shared decision making (Charles, 1997; Stevenson et al., 2000), which is central to current plans for NHS reform (Department of Health, 2010b, 2012). If, as the UK Government intends, shared decision making is to become the norm (Department of Health, 2010b, 2012), more timely and transparent communications about medicines might therefore be necessary in prisons. This could also reduce the potential for conflict, misunderstanding and patient dissatisfaction.

The GP account showed how it is possible to justify restricted access to medicines in prisons with minimal reference to safety and security discourses. When it comes to prescribing, prisons have previously been criticised for being preoccupied with security; a good example of this is the security versus empowerment debate in relation to ‘in-possession’ medication procedures in prisons, where individuals are given medicines to store and administer themselves, as they would be in the community (Department of Health, 2003b; Hassan et al., 2012). Given these debates, plausibly it has become less acceptable to deny medicines solely because they might be diverted. Arguably, security concerns could be readily upgraded to safety concerns, given the risks of overdose, misuse and hazardous drug interactions involving diverted medicines. However, due to the risk of discontinuation symptoms, seizures and other harmful health outcomes associated with abrupt withdrawal of psychotropic medicines, safety is arguably just as much an argument for prescribing as it is for not prescribing (Hassan et al., 2011b). We do not mean to argue, on the basis of our relatively limited data, that security and safety discourses are no longer used in debates regarding psychotropic medicines in prisons, or to deny their relevance. However, in this particular context, it is surprising that security and safety were not more prominent among the reasons given for not prescribing.

In conclusion, this study provides an example of how patients and doctors account for medication changes following imprisonment. Though medication practices constitute only one part of healthcare for mentally ill prisoners, they are a “key indicator of and contributor to the therapeutic prison environment” (Bowen et al., 2009). By examining the patient and
doctor accounts from a discursive perspective, this study builds on previous research by examining how psychotropic prescribing decisions in prison settings can be challenged and justified. This study focused on producing an intensive, rather than extensive, analysis. Yet, by focusing on the specific exemplar of psychotropic prescribing, we can better understand how the principle of equivalence is utilised in practice, which may have wider relevance within the arena of prison healthcare. Greater attention to the full range of discourses at work may help us to understand how prescribing decisions are made and communicated in prison healthcare settings and to engender more sophisticated, progressive approaches to medicines management.

**Acknowledgements**

We thank all the prisons, staff and patients who participated in this study. We are also grateful to Katrina Stredder for useful comments on this manuscript. This study was undertaken as part of the overall work programme of the Offender Health Research Network, which is funded by the Department of Health. However the views expressed are the authors’ own.

**Appendix**

<table>
<thead>
<tr>
<th>Transcription conventions</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>(.)</td>
<td>short (untimed) pause</td>
</tr>
<tr>
<td>(2)</td>
<td>pause in seconds</td>
</tr>
<tr>
<td>Yes</td>
<td>underlined word or syllable indicates added emphasis</td>
</tr>
<tr>
<td>(word)/(unclear)</td>
<td>utterance difficult to discern</td>
</tr>
<tr>
<td>(laughs)</td>
<td>laughter</td>
</tr>
<tr>
<td>right</td>
<td>semi-colon indicates elongated sound</td>
</tr>
<tr>
<td>NOW</td>
<td>block capitals indicate louder speech</td>
</tr>
<tr>
<td>“no”</td>
<td>indicates quieter speech</td>
</tr>
<tr>
<td>&gt;basically&lt;</td>
<td>words spoken quickly</td>
</tr>
<tr>
<td>&lt;well&gt;</td>
<td>words spoken slowly</td>
</tr>
<tr>
<td>You kn-</td>
<td>hyphen indicates cut off speech</td>
</tr>
<tr>
<td>.hhh</td>
<td>intake of breath (more h’s indicate longer breath)</td>
</tr>
<tr>
<td>?</td>
<td>rising intonation as in a question</td>
</tr>
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</table>
7. Discussion

7.1 Introduction

This mixed methods study aimed to determine patterns of psychotropic prescribing in prisons and consider the extent to which people with mental illness have ‘equivalent’ access to psychotropic medicines in prison.

In this chapter, I will consider for each of the three studies what the findings mean, how they fit into the wider research and policy literature and their strengths and limitations. Then, I will evaluate the strengths and limitations of the mixed methods study as a whole, consider the clinical implications of the work and identify directions for future work.

7.2 Study 1

7.2.1 Summary of main findings

Study one set out to determine whether there was continuity of prescribing between community and prison settings for mentally ill prisoners in receipt of psychotropic medication. In this study, almost a fifth (18%) of individuals entering prison reported that they were currently receiving prescribed psychotropic medication. However, findings showed that prescriptions for half (47%) of the medications reported at prison reception were not continued during the first week of custody, in many cases (43%) without a written reason. There was no significant relationship between psychiatric assessment and discontinuation of psychotropic prescriptions in prison, meaning the null hypothesis could not be rejected.

7.2.2 Comparisons with the previous literature

In identifying that the supply of psychiatric medicines is often interrupted for newly received prisoners, my findings confirm those of previous studies. In qualitative studies, prisoners have frequently reported that long-standing medication regimes were interrupted following
arrival into prison (either temporarily or permanently), causing them significant distress and instability (Bowen et al., 2009; Plugge et al., 2008).

In some cases in this study we can logically infer that medications were discontinued as a result of active decision-making processes; this would include cases where substitute drugs were given, medications were disconfirmed by community prescribers and/or psychiatric assessments were completed. In other cases mitigating circumstances were present, such as prisoners being in custody for very short periods, leaving prison staff insufficient time to verify and arrange prescriptions. However, in almost half (43%) of cases where medication was discontinued, none of these conditions applied. It is not clear from this study whether prescriptions were deliberately stopped for reasons not identified by this study, delayed longer than a week, disregarded, or unintentionally overlooked. However, patients have claimed that reasons given for discontinuation were often inadequate or non-existent, adding to the sense of frustration (Bowen et al., 2009; Plugge et al., 2008).

The previous literature has noted several difficulties in arranging medication for newly received prisoners, which may provide some explanation for the findings observed in the current study. These include the following points:

1. **The unpredictable timing and sheer volume of prisoners received on a daily basis can place heavy workload on reception staff at busy, local prisons serving the courts.** A recent evaluation of prison health reception screening procedures reported that healthcare staff had limited time available to ‘process’ newly received prisoners and felt pressure to rush health screening procedures, leaving them concerned about the quality of their work (Shaw et al., 2009a). This could arguably increase the risk of medication needs being overlooked, misunderstood or ignored.

2. **It is commonly believed that some prisoners deliberately exaggerate or make false claims about the prescribed medications they received in the community in order to obtain valued medications in prison.** It is well known that certain prescription-only psychotropic medications are popular among drug users, who may buy them illicitly and take them for their euphoric, anxiolytic or sedative effects (RCGP, 2011). Therefore, in prison, as in the community, individuals may seek psychotropic medication on prescription to be misused, traded or sold. Due to such risks, prisoners who seek prescriptions for psychotropic medication are sometimes treated with suspicion by
healthcare staff (Bowen et al., 2009; Hassan et al., 2012). Healthcare staff interviewed as part of a recent qualitative study by Bowen et al. (2009) admitted that, due to the high proportion of prescription claims subsequently revealed as ‘false’, some staff were reluctant to undertake the process of verifying prescription claims for commonly abused medicines, such as benzodiazepines, preferring instead to state they were not available in this prison.

3. Newly received prisoners often arrive at establishments late in the evening, after daily court sessions have finished and outside of normal GP hours, without any physical evidence of existing treatment plans or prescriptions. In order to make sure only those entitled to prescribed psychotropic medication received it in custody (see previous point), it is common policy within prisons that prescriptions must first be verified with community prescribers (Shaw et al., 2009b). A national evaluation of in-possession medication procedures undertaken in 2009 found that where prescriptions could not immediately be verified at prison reception, most prisons had contingency plans in place, often deferring verification tasks to the next day. However, few establishments specifically dedicated staff time for such activity, arguably increasing the risk of such tasks being marginalised (Shaw et al., 2009b).

4. Prison healthcare staff perceive difficulties in identifying community prescribers and obtaining information about prior prescriptions and care. Healthcare staff and prisoners can have difficulty in identifying community prescribers. Prisoners may arrive into custody in a distressed, tired or intoxicated state and may be unable (or unwilling) to recall GP contact details, if they have one. Furthermore, offenders commonly have complex health needs and thus could have received prescriptions via multiple services prior to custody, including drug and alcohol teams and community mental health services, in addition to their GP. Furthermore, in confirming prescription claims, healthcare staff perceive a lack of cooperation from community GPs, who can be reluctant to prioritise such requests, demand payment or be cautious about sharing confidential information about patients (Bowen et al., 2009; Shaw et al., 2009b).

5. The lack of a common electronic IT clinical records system, available to all healthcare staff who deal with prescriptions (including the prison pharmacy). The current study was conducted before the introduction of a dedicated clinical IT system (SystmOne) had been rolled out across the prison estate. Thus, some establishments were reliant on
paper-based clinical records or systems in prisons\textsuperscript{26}, which are arguably more prone to being misplaced or separated. Such factors make it difficult to quickly ascertain, communicate and share information on medication needs about prisoners. Lack of a modern IT system in prisons has been previously identified as a major impediment to providing equivalence of healthcare (Anaraki et al., 2003; BMA Cymru Wales, 2007; Department of Health, 2003b).

In summary, the wider literature notes a range of difficulties with reception screening procedures, widespread distrust and outdated clinical information systems which hamper medicines reconciliation procedures in prison. A combination of such factors could plausibly explain why in the current study, a significant proportion of the prescribed psychotropic medications reported at reception, were not prescribed during the first week of custody.

7.2.3 Strengths and weaknesses

This study arguably provides a useful contribution to an area of clinical importance in which there has been little published research. It benefits from a number of strengths. Previously, the available evidence has been based on small-scale, qualitative studies. Whilst such studies have the advantage of generating rich data on participant experiences, in doing so they necessarily focus on prisoner self-report. By using clinical records, this study was able to evidence and quantify the extent of discontinuity of prescribing between community and prison. To the best of the author’s knowledge, only a single quantitative study has previously identified that medicines were frequently not continued in custody; this providing a basis for the current study. However, the current study sought to build upon this initial work by discerning the reasons behind discontinuation of medication: where clarification from outside services had revealed that a prisoner had not been prescribed that medication in the community or where a substitute medication had been prescribed in custody, for example.

\textsuperscript{26}Indeed, even where SystmOne has been introduced, many establishments are not entirely ‘paperless’, continuing to use paper-based systems for prescribing, reception screening and/or archiving clinical records.
Confidence can be drawn from the large number of patient records sampled in this study, comprising 95% of those eligible for inclusion. This was largely due to the assistance of local prison healthcare staff and availability of electronic record systems in all but one of the participating sites. Whilst such assistance was gratefully received, some healthcare staff would have been aware of the purpose of the study in advance of data collection; it is possible, though unlikely, this influenced practice. Nonetheless, there were limitations in terms of sampling as only records for a single calendar month (per site) were sampled, at local prisons in the North of England. Thus, care must be taken when attempting to generalise these findings to prisons in other geographical regions. Nor can the study offer any insight regarding continuity of care for prisoners transferred between prisons, where reception arrangements notably differ.

This was a records based study. As such it only captured entries made in clinical records during the first week of custody; unrecorded clinical activity or entries made outside this period would have been missed. For the purposes of this study, only the presence of each factor within patient clinical records was recorded on data collection forms. Therefore, in this study there was no distinction between a) no record of an event or prescription in the clinical record and b) ‘missing’ data. It is possible this strategy may have led to underestimation of prescribing and other clinical events (e.g. psychiatric assessment). Also, it is unknown whether medication was actually dispensed, administered, supplied to or taken by the patient, only whether it was prescribed. Information on prior prescriptions was collected from the reception health screen. Some records, where there was insufficient detail recorded on prior prescriptions to at least identify the type of medication were omitted (e.g. ‘red tablets’), were excluded; there is a chance these may have been relevant. However, this strategy ensured that only cases where prison healthcare staff were aware that the prisoner claimed to be in receipt of a psychotropic medication were included.

Similarly, if a prisoner could not remember, or was unwilling to admit to having been prescribed a psychotropic drug at reception, their records would not have been included. This latter point arguably reflects a more general limitation of reception health screening procedures, not just this study.
7.3 Study 2

7.3.1 Summary of main findings

In study 2, a cross-sectional study was undertaken to determine rates and patterns of psychotropic prescribing in East of England prisons. A fifth of men and almost half of women in prison were prescribed at least one psychotropic drug. Antidepressants were the most commonly prescribed type of medication. Overall, after adjusting for age differences, men in prison were 5.5 times more likely and women in prison were 5.9 times more likely than community populations to be prescribed psychotropic medication. Therefore the null hypothesis, that rates of psychotropic prescribing would not be higher in prisons than in the community, was rejected.

Study findings indicated there were differences in the individual psychotropic drugs prescribed in prison and community settings. In particular, the following three patterns emerged: diazepam accounted for a higher proportion of prescriptions for hypnotics and anxiolytics in prison than in the community; among patients prescribed antidepressants, prisoners were less likely to be prescribed tricyclic antidepressants than community-based patients, and; there was a significant preference for mirtazapine, a noradrenergic and specific serotonergic antidepressant, in prison compared with the community.

Just half (53%) of psychotropic medications prescribed in prison were accompanied by an indication (diagnosis) upheld in the BNF in the patient notes. In a further 40% of cases, no indication at all was recorded.

7.3.2 Comparisons with the previous literature

7.3.2.1 Rates of prescribing

This study confirms the findings of previous research, which has consistently found higher rates of prescribing for psychotropic medications in prisons internationally (Baillargeon et al., 2001; Baillargeon & Contreras, 2001; Elger et al., 2002; Fazel & Danesh, 2002; Harcouët, 2010; Kjelsberg & Hartvig, 2005a). On the surface, the overall rates of psychotropic prescribing reported in the current study are remarkably similar to those reported within a
large study of psychiatric morbidity in prisons in England and Wales undertaken by the Office for National Statistics (Singleton et al., 1998). This study found that about a fifth of men and half of women in prison were prescribed at least one drug acting on the Central Nervous System. However, in comparison to the current study, the ONS study included a much wider range of drugs (any drug listed within BNF Chapter 4), which included analgesics, antiepileptics and drugs for substance dependence.

To facilitate more detailed comparisons, Figures 5 and 6 (page 189-90) compare the results of the current study with the findings of the ONS study, with a breakdown of prescribing rates by drug type. Figure 5 shows that since 1997, rates of hypnotic and anxiolytic prescribing (4.1) appear to have reduced slightly among women prisoners, though they have remained broadly similar among men (Figure 6). Antipsychotic prescribing rates appear to have risen slightly among men, though they have remained broadly similar among women. However, the most striking result of this comparison is the increase in antidepressant prescribing: since 1997 rates appear to have doubled among men and have increased by 50% among women.

**Figure 5:** Comparison of psychotropic prescribing rates among women prisoners quoted by Singleton et al. (1998) and the current study, by BNF chapter
Figure 6: Comparison of psychotropic prescribing rates among men prisoners quoted by Singleton et al. (1998) and the current study, by BNF chapter*

*Unlike women, prevalence rates aren’t available for male prisoners overall, which is why rates for remand and sentenced prisoners have been reported instead.

This apparent increase in antidepressant prescribing in prisons could reflect changes within prison healthcare. Arguably, however, it is more likely a reflection of a general, long-term, upward trend in antidepressant prescribing; following the introduction of selective serotonin reuptake inhibitors antidepressant prescribing has increased steeply since the 1990s in the UK (Middleton et al., 2001; NHS National Services Scotland, 2011; Prescription Pricing Authority, 2007) and in developed countries internationally (Barbui et al., 1999; Hall et al., 2003; Helgason et al., 2004; Pirraglia et al., 2003). Though the evidence in this area remains inconclusive, several explanations have been proposed in the literature including improved recognition of depression, increased help-seeking behaviour among patients, lower thresholds for prescribing and an increase in the duration of prescriptions (Middleton et al., 2001; Moore et al., 2009; Munoz-Arroyo et al., 2006). It has also been suggested that increased prescribing of newer antidepressants may be a reflection of the desire to reduce benzodiazepine prescribing, which have greater problems with abuse, withdrawal and dependence (Nutt, 2011). All of these factors may have also accounted for the apparent increase in prescribing observed since 1997 suggested by this study.
7.3.2.2 Do rates of psychotropic prescribing reflect higher rates of mental illness?

It has been suggested that psychotropic prescribing rates reflect rates of psychiatric morbidity in prison (Kjelsberg & Hartvig, 2005a). If this is the case, then estimates of prescribing should broadly correspond with estimates of mental illness in the prison population. The rates of psychosis in the ONS study (10-14%) appear to be broadly similar to the rates of antipsychotic prescribing in the current study (6-11%) (Singleton et al., 1998). However, there is little similarity between the rates of neuroses quoted by Singleton et al. (40-76%) and the rates of antidepressant prescribing reported in the current study (14-33%), which are much lower. However, in the ONS study, psychotropic medication was used as an indicator of mental illness. Therefore, those assessed as mentally ill were inevitably more likely to take psychotropic medication. This, as the authors themselves have noted (Singleton et al., 1998), makes it difficult to interpret relationships between mental illness and prescribing.

The example above illustrates a more general point pertinent to this discussion: that estimates of mental illness vary according to aspects of the study design and methodology, including sampling techniques, definitions of mental illness, the way mental illness was assessed (e.g. the particular diagnostic tools used), and the characteristics of those conducting assessments (e.g. lay or clinical researchers). Indeed, other studies have quoted different rates of mental illness. For example, a large systematic review by Fazel and Danesh (2002), which incorporated data from 23000 prisoners in western countries, estimated that 4% of men and women in prison had psychosis, whilst 10% of men and 12% of women had major depression. These rates of mental illness are lower than both the ONS study and the corresponding rates of antidepressant and antipsychotic prescribing reported in the current study.

Notwithstanding methodological differences between studies, the wider literature suggests there are other reasons why rates of psychotropic prescribing and mental illness might not mirror each other. Arguably, there are three patient groups to be taken into account:

- Individuals with mental illness who are prescribed psychotropic medications (group 1);
- Individuals with mental illness who are not prescribed psychotropic medications (group 2); and


• Individuals prescribed psychotropic medications who do not have a mental illness (group 3).

**Figure 7**: Venn diagram illustrating overlapping relationships between patient groups (not to scale)

![Venn diagram](image.png)

Firstly, it is likely that not all cases of mental illness in prison will be treated using psychotropic medications, or indeed treated at all (Kjelsberg & Hartvig, 2005a). These individuals will be included in group one (Figure 7). Whilst psychotropic medications are commonly used to treat mental illness, non-pharmacological alternatives, such as counselling, cognitive behavioural therapy and psychological therapies, have also been recommended, especially for common mental illnesses (NICE, 2009a, 2011). Furthermore, some cases of mental illness may go undetected. A recent study found that just a quarter of prisoners with serious mental illness were assessed by prison mental health services during their first month in custody and even fewer were accepted onto caseloads (Shaw et al., 2009c).

Secondly, not all prisoners prescribed psychotropic drugs may have a mental illness (group three). Psychotropic medications have, over time, been prescribed ‘off label’, outside the narrow terms of their licences, to treat conditions other than mental illness (Baldwin & Kosky, 2007). For example, the antidepressant amitriptyline is commonly used to treat neuropathic pain, whilst carbamazepine can be used to treat both epilepsy and bipolar disorder; all of these indications are listed in the BNF (2010). Furthermore, Kjelsberg and Hartvig (2005a) also note the problem of drugs prescribed for “factitious disorders”. Thus, a proportion of psychotropic drugs may be prescribed for conditions other than mental illness.
The previous discussion has made the point that comparisons between psychotropic prescribing rates and rates of psychiatric morbidity in prison are complex: it is unlikely that there will be complete correspondence between rates. Nonetheless, there is evidence that underlying patterns of mental illness exerted some influence on the patterns of prescribing in the current study. In several respects relative patterns of psychotropic prescribing shared similarities with the wider literature regarding relative patterns of mental illness. Each of the following statements apply equally to the psychotropic prescribing rates observed in the current study as they do the wider literature on mental illness prevalence rates among prisoners:

- There are increased rates among prisoners, when compared with the wider community (Fazel & Danesh, 2002; Singleton et al., 1998);
- There are higher rates among women, compared to men (Birmingham et al., 1996; Parsons et al., 2001; Shaw et al., 2009c; Singleton et al., 1998; Steadman et al., 2009);
- There are higher rates among remand prisoners (and local establishments), compared to sentenced prisoners (and training establishments) (Birmingham et al., 1996; Singleton et al., 1998); and
- Rates of depression (antidepressants) are higher than rates of psychosis (antipsychotics) (Birmingham et al., 1996; Brooke et al., 1996; Fazel & Danesh, 2002; Parsons et al., 2001; Shaw et al., 2009c; Singleton et al., 1998).

7.3.2.3 Indicated prescribing

The previous section concluded that rates of mental illness in prisons could only partly account for the rates of psychotropic prescribing observed in this study. One way of further exploring prescribing patterns is to consider the reasons why individual medicines were prescribed in prison. In the current study, the indications recorded for individual psychotropic medicines prescribed in prison were noted and compared against the indications listed in the BNF. Overall, almost half of psychotropic medications prescribed in prison were not accompanied by an indication upheld in the BNF. In the wider community, off-label use of psychotropic medications appears to be common. For example, studies have reported that a significant proportion of antidepressants are prescribed for disorders other than depression, including smoking cessation, pain, migraine and insomnia (Pomerantz et al., 2002).
al., 2004). However, the current study found that in 40% of cases, no indication at all was recorded.

This interesting result might be explained by a number of different factors. One possibility worth considering is that psychotropic medicines were prescribed for appropriate clinical indications; however, these were not recorded in the patient notes. Prior to this study, there appears to be no published empirical evidence of poorly documented prescribing rationales, specifically, in prisons. However, a large study in the USA found that 40% of community-based patients who received a prescription for an antidepressant had never been diagnosed with depression (Ornstein et al., 1999). It is possible that the situation might not necessarily be unique to prisons. In one qualitative study, UK hospital doctors were interviewed to determine the validity of prescribing appropriateness indicators (Tully & Cantrill, 2006). Whilst interviewees agreed that indication was clinically important and should be documented, they acknowledged that an appropriate indication could exist without it being recorded in the notes. As one consultant in the study commented (Tully & Cantrill, 2006 p.90):

“**You can prescribe appropriately without writing anything in the notes, the problem is just then nobody knows how appropriate they were [laughs] they have to make up their own mind, you know, what your reasons were, so unless its barn door obvious, it’s best to write it in the notes.”**

Doctors interviewed in the same study commonly believed that even if the indication was omitted, other healthcare professionals would be able to deduce the rationale for prescribing based on other available information (Tully & Cantrill, 2006). Despite differences in treatment setting, this may also apply to prescribers in prison, which could explain the findings of the current study.

Alternatively, if psychotropic medicines were prescribed to patients without an appropriate prescribing rationale, the literature highlights a number of reasons why this could have occurred. Firstly, prescriptions for psychotropic medicines may have been ‘inherited’ from prescriber in the community or in other healthcare settings. Newly received prisoners rarely arrive at prison reception with clinical records or evidence of prescriptions, yet frequently require medical attention.Whilst prisons routinely seek to verify prescription claims with community prescribers, this is a challenging task, which may be delayed, overlooked or unsuccessful (Shaw et al., 2009b). Furthermore, the information returned to the prison may allow a prescription to be confirmed, but lack evidence of an adequate prescribing rationale.
In this context, it is possible that doctors in prisons might continue such prescriptions without further investigation.

A second possibility is that doctors may perceive pressure to prescribe psychotropic medicines in prison. Doctors working in prisons are arguably placed in a sensitive position, faced with pressure from both prisoners and the establishment itself when making clinical decisions (Council of Europe, 1998). Prisoners may present a complex clinical picture and there may be pressure to prescribe psychotropic drugs for genuine or perceived needs, or for sub-clinical symptoms. Indeed, symptoms of anxiety, depression and distress are common in prisoner populations during the early period of custody, even among those without a formal mental illness (Hassan et al., 2011a). Although less severe symptoms might respond just as favourably to increased support, social interventions or ‘talking therapies’, such interventions may be underdeveloped in prisons; both the Bradley Report (2009) and the mental health thematic review undertaken by Her Majesty’s Chief Inspector of Prisons (HM Inspectorate of Prisons, 2007) have emphasised this issue.

Furthermore, pressure to prescribe psychotropic medicines may come from other staff, as well as prisoners. Historically, the accounts of prison doctors have suggested that psychotropic drugs were used for disciplinary as well as therapeutic purposes, to keep difficult prisoners under control (Owen & Sim, 1984; Sim, 1990). In contemporary prison healthcare settings, prescribing for purely disciplinary reasons would be highly controversial. However, it is plausible that doctors may face pressure from prison staff, who commonly confuse behavioural problems and personality disorder with mental illness (Telfer, 2000), to prescribe psychotropic medications. Factors such as these may all conspire to place increased pressure on doctors to prescribe psychotropic medications.

Thirdly, there may be inadequate support and training for prescribers in prison. Historically, support from pharmacy services in prisons has been inadequate and inconsistent, dominated by a ‘supply only’ culture (Department of Health, 2003b). Since the publication of A Pharmacy Service for Prisoners (Department of Health, 2003b), which set out a vision for a modernised, patient-focused pharmacy service, there have arguably been signs of improvement (Simpson & Shah, 2006). However, pharmacy service providers, models of care and staffing continue to vary throughout the prison estate (Shaw et al., 2009b), thus the consistency of support arguably remains questionable. The general shortage of training
and development opportunities for prison doctors has also been a longstanding problem (BMA Cymru Wales, 2007; Department of Health, 2001; HM Prison Service and NHS Executive, 1999). As recently as 2001, a survey of prison doctors indicated that a small number did not hold a formal general practice qualification (Pearce et al., 2004). Transfer of responsibility for prison healthcare services to the NHS brought new implications for the standards expected of healthcare, and of prison doctors. Nonetheless, it has been suggested that many doctors working in prison lack the confidence and skills to treat prisoners with mental illness (Broughton, 2011). For example, a national survey commissioned by the Department of Health to identify skills and training needs for doctors working in prisons found that most doctors who cared for mentally ill inpatients lacked training in psychiatry (Pearce et al., 2004). Thus, deficits in prescribers’ skills, confidence or support may have contributed towards the findings observed in the current study.

### 7.3.2.4 Differences on the individual drugs used in prisons

We found that the particular psychotropic drugs prescribed in prison differed from those used in community settings. Short-acting benzodiazepines (e.g. temazepam) are discouraged in prison due to their dependence and misuse potential (RCGP, 2011). Dependence on benzodiazepines (both illicit and prescribed) is common among prisoners entering custody and English prisons operate a policy of routine benzodiazepine detoxification on entry to custody (Department of Health, 2006; RCGP, 2011). The BNF recommends patients are transferred to equivalent doses of diazepam, a long-acting anxiolytic, as a precursor to such treatment (BNF, 2010). This could explain why diazepam accounted for half of all prescriptions for hypnotics and anxiolytics in prison and there were no instances of temazepam prescribing. It might also explain why rates of hypnotic and anxiolytic prescribing were lower in the prison for sentenced men, as such establishments do not usually accept prisoners currently undergoing detoxification.

Patients prescribed antidepressants were less likely to be prescribed tricyclic antidepressants than community-based patients. In comparison to a previous unpublished study of antidepressant prescribing in 2003 (Howells, 2003), the current study found that tricyclic antidepressants accounted for a smaller proportion of antidepressant prescriptions in prison (18% vs. 39%), indicating tricyclic use may have decreased over time. Tricyclic antidepressants have similar efficacy to other classes of antidepressant drugs, but are more
dangerous in overdose (BNF, 2010). Given the high rates of suicide and self-harm among prisoners (Fazel et al., 2005b), this may explain the lower rate of prescribing in prisons, compared with the community, and could be regarded as a positive finding.

There was also a significant preference for mirtazapine, a noradrenergic and specific serotonergic antidepressant, in prison compared with the community. Sedation and weight gain are relatively common, but tolerable side effects among patients who take the drug (National Collaborating Centre for Mental Health, 2010). Anecdotal evidence suggests that in a prison setting, where sleep problems are common (Elger, 2007), sedative side effects may be viewed as desirable and therapeutically beneficial; unfortunately the sedative effects of mirtazapine also increase its value and potential for diversion among prisoners without an identifiable clinical need (Lange, 2008; RCGP, 2011). Recent guidance issued on safer prescribing in prisons (RCGP, 2011) has reiterated that mirtazapine should not be prescribed as a sleeping tablet and should be prescribed second or third line for major depression only, in line with NICE guidance (NICE, 2009a). Nonetheless, such factors may have contributed towards the increased frequency of mirtazapine prescriptions in prisons observed in this study.

7.3.3 Strengths and weaknesses

Previously, just one research study from the UK (Singleton et al., 1998), albeit over a decade old, and relatively few studies internationally (Baillargeon et al., 2001; Baillargeon & Contreras, 2001; Elger et al., 2002; Harcouët, 2010; Kjelsberg & Hartvig, 2005a), have described rates of psychotropic prescribing in prisons. The current study uniquely benefited from a large, representative community comparison group, and accounted for differences in age and gender between prison and community populations, reducing the potential for bias and confounding. To the best of the author’s knowledge, only two studies previously included a community control group to aid comparisons (Elger et al., 2002; Kjelsberg & Hartvig, 2005a); however, only one of these made statistical comparisons (Elger et al., 2002) and neither adequately accounted for age and gender differences between prison and community populations.\footnote{Elger at al. (2002) did limit community and prison comparisons to a subgroup of male patients aged under 39 years old. However, whilst this demonstrates recognition of the need to account for different population structures, it is arguably inadequate.}
Despite these strengths, this study was not without limitations. A cross-sectional survey design was selected in order to measure point-prevalence prescribing rates. Whilst cross-sectional studies have several advantages – they are cheap, quick, relatively simple and allow multiple outcomes to be studied simultaneously - they fail to distinguish the temporal sequence of events and by themselves, they do not allow us to establish cause and effect (Mann, 2003). Thus, it would be inaccurate to assume that, because rates of prescribing are higher in prisons, that imprisonment causes the prescription of psychotropic medication. Indeed, prison mental health is an area involving complex patient groups with high rates of comorbidity, substance misuse and social deprivation; thus, it is especially difficult to isolate and measure the impact of independent variables (Gibbon, 2008). Whilst this study has succeeding in yielding some initial, exploratory findings, further work is necessary to explore the trajectory of prescribing decisions over time and to further unpick clinical, demographic and situational influences on prescribing outcomes.

Indications recorded in clinical records were checked against those listed in the BNF. It is possible that patients may have derived benefit from certain medicine for indications not listed in the BNF. However, under the circumstances, this represented the most comprehensive and systematic approach for research purposes. Prescription and diagnostic data, for patients in both settings, were obtained from patient clinical records. These represent the only available source of routine data linking patient-level clinical information with prescribing, which is a necessary pre-requisite to judge prescribing appropriateness (Cantrill et al., 1998). However, clinical records are regarded as imperfect tools, often maintained poorly and afforded low priority (Pullen & Loudon, 2006). The format, organisation and quality of clinical record keeping in prisons have previously been criticised (Anaraki et al., 2003; Department of Health, 2003b). In prison, offenders with mental health problems may receive regular, multi-disciplinary healthcare interventions and can accumulate extensive electronic and paper clinical records, occasionally spanning multiple volumes (Anaraki et al., 2003). Whilst this could be regarded as a rich resource, there is a risk that important information may become diluted amongst more superficial information (e.g. detailed daily nursing notes for periods of inpatient care). Thus, it is possible that relevant indications or diagnoses were missed in this study, potentially underestimating the proportion of prescriptions with appropriate indications. Furthermore, for ethical reasons, patient data were accessed and collected by members of each prison’s healthcare team.
Staff received written, standardised instructions and access to additional support from the researcher where required. However, despite best efforts, data on inter-rater reliability were not collected at all sites, meaning the influence of multiple data collectors within and between prisons could not be evaluated.

An alternative way of conducting this study would have been to consider prescribing within specified clinical diagnoses (e.g. schizophrenia). However, the current study had the advantage of looking at all psychotropic prescribing, regardless of diagnosis. This then enabled the uncommon step of considering whether psychotropic medications were prescribed according to their accepted clinical indications. Indication, though fundamental, is not the only measure of prescribing appropriateness. Indicators of appropriate prescribing relating to dose, cost, safety and prescription duration have also been identified, all of which are routinely available in patient clinical records. In keeping with the focus on prisons, GPRD data on indications were not analysed. Therefore it is not yet possible to determine whether the prison findings were in line with community norms. These may be fruitful avenues for further research to explore, building on the initial work presented within this thesis. Furthermore, appropriate prescribing may go beyond pharmacological rationality. Some have argued that good prescribing should take into account the particular balance of circumstances including patient needs, expectations and the greater good, not just the pharmacological properties of medicines (Barber, 1995; Cribb & Barber, 1997). Thus, whilst this study could be regarded as a useful platform for further work, it is limited to judging one particular aspect of appropriateness. Developing measures that adequately account for such factors remains a significant challenge for researchers, though some have tried (Barber et al., 2005).

With regard to sampling, a number of points are noteworthy. In prisons that used SystmOne, all current patients were included in the computerised searches of clinical records. Assuming that all patients had a clinical record (this was not checked), this strategy minimised non-response bias and maximised the precision of prevalence estimates. Opting for point-prevalence estimates simplified denominator calculations, with no need to count person years; equally, however, this strategy may have resulted in underrepresentation of prisoners with shorter sentences. Furthermore, it is possible, though unlikely, that choice of census day may have affected the findings; less than seven months passed between the first and the last census day. All patients (prison and community) in this study were located in
the East of England. East of England prisons receive individuals from courts and establishments throughout England and Wales, notably London which is in relatively close proximity. Prisoners transferred from other regions of the UK may have been treated by GPs subject to different prescribing policies than those based in the East of England. No data on home address or postcode was collected for individual prisoners; therefore it was not possible to determine the proportion of prisoners that resided in the East of England prior to imprisonment or rule out this potential sampling bias. A sample of East of England community patients were obtained from the GPRD for comparison purposes. Though the sample was large, information on ethnicity and socioeconomic status were unavailable for individual GPRD patients. Furthermore, the East of England has pronounced urban/rural divisions and the sociodemographic profile of residents may differ from the rest of UK. For example, compared with the UK overall there are a slightly smaller proportion of people from BME groups (Dunn, 2005). Comparisons of prison and community prescribing rates were matched only on gender and age. Thus, ethnic, socioeconomic, geographic and other unknown factors may have accounted for the differences observed between prescribing among prison and community. Consequently, care should be taken when interpreting the findings as they might not be generalisable elsewhere to other areas of the UK, with different populations and prescribing policies.

A final point is that the GPRD only includes prescription data for drugs prescribed in primary care, therefore psychotropic drugs prescribed in secondary care (e.g. hospital outpatient appointments) were excluded from the estimates provided in this study. This may have resulted in an underestimate of community psychotropic prescribing rates; however the majority of prescribing in the UK takes place in primary care, thus the impact is likely to be small.

7.4 Study 3

The aim of study three was to establish a) what prisoners and healthcare staff thought the purpose of psychotropic prescribing was in prisons and b) how they accounted for apparent differences in access to psychotropic medicines between prisons and communities.
7.4.1 The purpose of psychotropic prescribing in prisons

Paper 3 presented the findings of a thematic analysis of qualitative interviews with mentally ill prisoners and healthcare staff. The findings indicated that staff and patients viewed psychotropic medicines as a valued means of treatment, which affected individual patients and the wider prison regime. Symptom reduction was a key aspect of both patient and staff discourses about uses of psychotropic medication. In a study of patients with schizophrenia (Rogers et al., 1998), management of symptoms was the most commonly reported reason for accepting antipsychotic medication. A focus on symptom reduction is also common in the mainstream clinical literature on psychotropic medication (NICE, 2009a, 2009b; Taylor et al., 2009). Patients in the current study commonly reported that symptoms were reduced, rather than completely eradicated. This, too, is consistent with the wider clinical literature, which has shown that patient responses to psychotropic drugs vary (Anderson et al., 2008; Falkai, 2008; Lieberman et al., 2005; Meltzer & Bobo, 2006; Taylor et al., 2009). Nonetheless, patients valued the sense of stability they felt when taking psychotropic medicines, which they felt improved their ability to cope.

In some respects, the perspectives of prisoners with mental illness in this study were broadly consistent with those of patients in community settings. Coping and symptom reduction has also been identified as a theme in qualitative studies on psychotropic medicine taking (Rogers et al., 1998). However, there were some differences. Among patients in the community, fear of dependency on psychotropic medicines and not being able to cope without them appears to be stronger than it was in the current study (Britten et al., 2010). In particular, in the current study patients commonly relied upon the sedative effects of certain psychotropic medications and reported symptoms of insomnia when they were withdrawn or missed, even for short periods. In contrast, patients in the community who take medicines for mental illness have more commonly viewed sedation as a negative side effect to be weighed against the positive benefits of symptom reduction (Rogers et al., 1998; Scottish Association for Mental Health, 2004).

Principally, two explanations have been proposed within the prison-based literature that could explain the latter finding. Firstly, although formal research on insomnia in prisons remains rare, symptoms of insomnia appear to be increased among prisoners (Elger, 2007). A combination of situational, environmental and clinical factors may contribute towards difficulties in sleeping, including increased anxiety, stressful life events, drug and/or alcohol
withdrawal regimes, uncomfortable surroundings and increased noise levels. The sedative effects associated with some psychotropic medications may therefore be welcome relief for some prisoners, enabling them to sleep. Secondly, many prisoners have a history of substance misuse (Fazel et al., 2006) and may be accustomed to taking prescribed or illicitly obtained psychotropic medications. Thus, medicines with sedative properties may be sought to ameliorate genuine or perceived clinical needs, or to be misused (RCGP, 2011). Indeed, staff interviewed in the current study were also concerned regarding the use of psychotropic medicines with sedative effects, including certain sedating antidepressants and antipsychotics, in addition to hypnotics.

Healthcare staff and, to a lesser extent, patients also identified ways in which effective psychotropic prescribing supported the prison regime by contributing towards an ethos of rehabilitation and maintaining order. Conversely, failure to prescribe appropriate medicines for mental illness was seen to be potentially disruptive to the regime and to other prisoners. The link between treatment and order is not new. Sim (1990) has argued that healthcare professionals have had longstanding roles in maintaining the fragile order in prisons. In the past, there were concerns that psychotropic medicines were used for disciplinary, rather than therapeutic, purposes to keep a ‘quiet prison’. The findings of the current study indicated that some healthcare staff perceived pressure to prescribe from prison discipline staff. However, this was attributed to failure to distinguish between behavioural problems and mental illness, rather than explicitly disciplinary reasons. This problem has also been noted in the wider literature (Telfer, 2000).

7.4.2 Accounting for medication changes following imprisonment

Prisoners in previous qualitative studies have commonly reported that changes were made to their prescribed medication following imprisonment, often without adequate justification (Bowen et al., 2009; Douglas et al., 2009). The discursive element within study three (paper 4) can be seen to build on this work by revealing the specific rhetorical strategies and discourses used to structure patients’ complaints about psychotropic prescribing decisions following imprisonment. It also showed how a defence could be mounted against such complaints.

The discursive analysis identified three related strategies used by patients to organise their descriptions of medication changes in prison: they established entitlement to psychotropic
medication, discredited the clinical judgement of doctors in prison and attributed negative outcomes to changes to medication regimes. These descriptions drew on well-established prison health policy discourses, such as equivalence of care and suicide prevention, and were rhetorically structured to increase the creditability and objectivity of their accounts. The effect of this was to produce well-organised complaints about medication changes, directed specifically at doctors in prison.

Nonetheless, though patients’ complaints were well-executed, my analysis of the GP’s account showed that, even under these difficult conditions, it was possible to mount an effective defence. The GP account demonstrated how debates about prescribing could be fought on grounds of clinical need, rather than continuity of care, raising questions about the utility of the principle of equivalence.

A noticeable feature of all three of the accounts examined was the effort that went into ‘identity work’. According to Davies and Harré, identity is not a fixed, cognitive entity; rather who we are is “always an open question with a shifting answer” (1990 p.46) depending on the made available within talk and interaction. In the context of accounts about prescribing decisions, the discursive analysis showed how subject positions such as ‘patient’ and ‘mentally ill’ were used to justify access to psychotropic medicines in prisons and vice versa. These labels are significant because decisions about offender healthcare are made in the context of wider societal discourses about criminal justice policy, the economy and which groups are most ‘deserving’ (Senior & Shaw, 2011). In criminal justice settings, psychiatric diagnoses can potentially have a considerable influence on how an individual is treated; not just with regard to access to psychotropic medication, but also their perceived accountability for offences and the settings to which they are sent (e.g. prison or hospital). Thus, longstanding questions such as Patient or Prisoner? still remain relevant in prisons and hold significant implications for accountability, management and care.

In the GP account analysed in this study, community prescribing practices were questioned, thereby undermining the choice of reference standard for judgment of prison healthcare. Though it could have been down to the situational context, my conversations with prison health professionals (as part of this study and more broadly) suggest to me that staff do indeed orient differently to the equivalence debate than patients, some of whom may equate equivalence with continuity or ‘sameness’. By aspiring to exceed, rather than mirror, community standards of healthcare the GP deflected accusations of inequitable care.
and repackaged differences between community and prison healthcare as signs of progress, rather than inequity. Indeed, the notion that prisons are not automatically detrimental to mental health can be found elsewhere in the literature. For example, longitudinal studies have demonstrated that, in the majority of people, psychiatric symptoms actually improve in prison (Blaauw et al., 2007; Hassan et al., 2011a; Taylor et al., 2010).

Patients reported that changes to medication were made without adequate consultation and explanation, causing significant frustration and distress. In this respect, the findings echo those of previous qualitative studies (Bowen et al., 2009; Douglas et al., 2009), suggesting communication problems between prescribers and patients in prison. According to patient accounts, there appeared to be inadequate opportunities for mutual involvement in decision making and information sharing between prescribers and patients. Yet, these (along with consensus building and reaching agreement) are pre-requisites for shared decision making (Charles, 1997), which is central to current plans for NHS reform (Department of Health, 2010b, 2012).

The findings of this study also suggest it is possible to justify restricted access to medicines in prisons with minimal reference to safety and security discourses. When it comes to prescribing, prisons have previously been criticised for being preoccupied with security; a good example of this is the security versus empowerment debate in relation to ‘in-possession’ medication procedures in prisons, where individuals are given medicines to store and administer themselves, as they would be in the community (Department of Health, 2003b; Hassan et al., 2012). Given these debates, plausibly it has become less acceptable to deny medicines solely because they might be diverted. Arguably, security concerns could be readily upgraded to safety concerns, given the risks of overdose, misuse and hazardous drug interactions involving diverted medicines. However, given the risk of harm associated with abrupt withdrawal of psychotropic medicines, safety is arguably just as much an argument for prescribing as it is for not prescribing (Hassan et al., 2011b). It would be premature to argue, on the basis of this relatively limited data, that security and safety discourses are no longer used in debates regarding psychotropic medicines in prisons, or to deny their relevance. However, in this particular context, it was surprising that security and safety were not more prominent among the reasons given for not prescribing.
7.4.3 Strengths and weaknesses

In demonstrating how and why psychotropic medicines are prescribed, this qualitative study adds to a growing field of research on prescribing practices in prisons (Bowen et al., 2009; Condon et al., 2007; Douglas et al., 2009; Hassan et al., 2012; HM Inspectorate of Prisons, 2007) and complements the quantitative arm of this mixed methods study. The thematic approach allowed a detailed, yet accessible, exploration of psychotropic medication use in prisons, revealing the extent of consistency and divergence between staff and patient perspectives. Meanwhile, the discursive element of this study added depth to the analysis, showing the detail of how prescribing decisions could be justified and challenged in interaction.

Nonetheless, there were limitations. The sample of patients only included people who were known to prison mental health services. Therefore, this study cannot comment on the perspectives of individuals who were not known to services or were taking psychotropic medicines for non-psychiatric purposes. These individuals may have had different needs, experiences and perspectives on use of psychotropic medicines in prisons. Furthermore, the selection of patients to interview was mediated by prison mental healthcare staff. Whilst this was the only practical option available, within logistical and ethical constraints, this may have shaped the findings. For example, staff might have selected compliant, satisfied patients. However, it is encouraging that patient responses were neither uniform nor overwhelmingly positive, indicating otherwise. The sample of staff included a range of healthcare staff. However, other healthcare and discipline staff working in prisons may hold different views about the purpose of psychotropic prescribing. In particular, it would be useful to elicit the perspectives of discipline staff, who take responsibility for the day-to-day management of prisoners on the wing.

In this study, interviews were used to generate focused, detailed data on psychotropic prescribing. Whilst interviews are a popular method in qualitative research, it is important to acknowledge they are specific social occasions with their own conventions (Lee & Roth, 2004; Potter & Hepburn, 2005a). Using ‘naturally occurring’ talk and texts might have overcome some of these limitations, however I rejected this on the grounds of ethical and practical constraints, which are particularly complex for researchers in prisons (Hayes et al., 2010). In this qualitative study, and particularly the discursive analysis, a number of strategies were used to minimise the shortcomings of using interviews, including; providing
a detailed account of how interviewees were selected; describing how interviews were set up and conducted (and providing supporting documentation, such as information sheets and interview schedules); transcribing non-verbal information in extracts; including interviewer talk within extracts; and not treating talk as a direct route to ‘reality’. I also recognise that I took an active role in producing interview data and that, due to my unique personal and social characteristics, interviewees will have oriented to me in a particular way. Thus, another person posing similar questions might have yielded different responses and conclusions.

Furthermore, I undertook the vast majority of the coding and analysis process by myself. Although my supervisors and peer debriefer gave detailed comments on drafts of my work, ultimately I had the greatest influence over the selection, description and presentation of data and themes. One supervisor in particular read the full interview transcripts to ensure the resulting analysis felt credible and defensible. However, it would have enhanced the trustworthiness of the qualitative analysis if all supervisors had been given access to the data and had the opportunity to be involved in coding and analysis. This is not to say that the themes and discourses reported within this thesis would not be recognisable to others. However, a greater level of input from multiple individuals with different backgrounds and perspectives could have produced additional, or differently nuanced, insights (Guba & Lincoln 1989; Henwood and Pigeon, 1992).

A final point concerns the four East of England prisons where I collected data. As the literature review showed, prisons in England and Wales vary in terms of size, population, security, healthcare resources, policies and the functions they perform. All of these may have affected participants’ perspectives and individual experiences. For example, a training prison with a relatively stable population might be expected to have more of a focus on treatment and rehabilitation than a local prison, where there is a higher turnover of prisoners. Additional contextual information on the policies and medicines management were not consistently collected as part of this study, but may have helped to produce a more contextualised and sensitive analysis. Whilst care was taken to sample a range of prisons and participants in this study, other prisons elsewhere, with different populations (for example young offenders), resources and models of medicines management may have different perspectives on psychotropic prescribing.
7.5 Studies 1-3: an integrated overview

An advantage of using mixed methods is that problems can be examined from multiple angles. In the previous sections I have examined the findings of the three studies individually. In this section, I will consider all three studies as an integrated programme of work in order to look at the ‘bigger picture’.

7.5.1 Main findings

The qualitative and quantitative components of this mixed methods study complemented each other well, adding different dimensions to the analysis. Study one showed that half (47%) of all psychotropic medicines reported on entry into prison were discontinued, confirming the findings of previous quantitative and qualitative studies in this area (Bowen et al., 2009; Douglas et al., 2009; HM Inspectorate of Prisons, 2000; Plugge et al., 2008; Shaw et al., 2006). Findings from paper four deconstructed accounts of medication changes in prison, showing how changes to medication could be portrayed differently by patients and doctors, depending on perceptions of clinical need, mental illness, clinical expertise and the principle of equivalence. The analysis showed how the particular constructions used had implications for the right to access or deny psychotropic medications in prisons.

Study two provided estimates of psychotropic prescribing rates in prisons; arguably the most robust figures to be produced in England since the 1997 ONS survey (Singleton et al., 1998). This showed high rates of psychotropic prescribing in prisons; overall, psychotropic medications were prescribed to 20% of men and 44% of women in prison. After adjusting for age, rates of prescribing in prison were at least five times higher than in the general population. However, in half (47%) of prescriptions for psychotropic medication in prison, there was no valid clinical indication recorded, raising questions about the appropriateness of prescribing in this area. In qualitative interviews, staff and patients indicated that psychotropic medicines were viewed to have multiple purposes in prisons (paper three). Psychotropic medicines were viewed to help reduce symptoms, but were also used as a coping strategy and to reduce insomnia in prison. Furthermore, patients perceived insufficient access to alternative forms of treatment and support. Thus, the wide range of uses associated with psychotropic medication, and lack of alternatives, could provide some explanation for the high rates of prescribing reported in study two.
7.5.2 Strengths and limitations

Using a combination of quantitative and qualitative data, within a mixed methods design had a number of advantages. Firstly, I was able to examine psychotropic prescribing from multiple angles, to develop a ‘rich’ analysis of the problem that would not have been available to me had I used an exclusively qualitative or quantitative approach. This allowed me to develop an appreciation of the scale and pattern of prescribing as well as the reasons why these occurred. Framing the work within the pragmatic paradigm gave me the flexibility to choose from a wide range of methods, and to incorporate different perspectives (including social constructionism), where I considered these useful.

I tried to produce a coherent and comprehensive piece of research. However, every study has its limitations. In the case of this study, at times I felt my aim was too broad and I possibly had too much freedom. In defining three distinct studies, there was the potential to be overwhelmed by data. Furthermore, there was the risk that the studies could seem disconnected, without a logical progression. A number of strategies helped to keep me on track. Developing, refining and adhering to a set of four interrelated research questions helped to clarify my purpose and navigate a clear way through the work. Secondly, conducting study one prior (rather than parallel) to studies two and three spread out the data collection and provided an opportunity to refine my methods and approaches. Thirdly, using social constructionism as a theoretical framework helped to unify the qualitative work and set some boundaries for the analysis. Lastly, presenting the results as a series of papers (an alternative format thesis) helped me to consider the intended audience of my work and focus on the key messages of each study.

Critics might also point out the gaps in this work. A significant amount of the data collected was not subsequently analysed. In particular, study two did not analyse data on dose, ethnicity, legal status or coexisting clinical diagnoses. Also, beyond gender, it did not distinguish between prescribing patterns in different demographic groups, such as older prisoners or black and minority ethnic groups, which may have distinct clinical needs and patterns of prescribing. Items were excluded for a range of reasons including reliability, analytical factors, completeness and lack of space. Furthermore, though some of these data and analyses had the potential to be interesting, peripheral data could have detracted from
the key messages of this thesis. Nonetheless, the possibility of follow-up analyses should not be ruled out in future. In the qualitative study, data was collected from patients’ clinical records relating to prescribing. This could have supported a richer qualitative analysis, of prescribing accounts in particular. Ultimately, however, I excluded these data on ethical grounds. Given the small sample of prisoners and prisons, I could not guarantee that people would be unable to identify individual patients.

**7.5.3 Clinical implications**

In the following section, clinical implications of the research are discussed for each of the three main stages of the offender pathway through prison: reception into custody; during imprisonment; and preparation for release back to the community (Figure 8). Subsequently, overarching themes are discussed, relevant to the entire pathway.

**Figure 8: Summary of offender pathway**

![Summary of offender pathway](image)

**7.5.3.1 Prescribing for newly received prisoners**

Prison mental health policy clearly states that medication for mental disorder should not be automatically withdrawn on entry into prison without proper clinical assessment (Department of Health & HMPS, 2001). Yet, the findings of study one indicated that in almost half of cases continuity of medicines supply was disrupted on entry into custody, often without any written reason recorded in the notes. This is concerning. Abrupt cessation of certain psychotropic medicines can have potentially serious health consequences for a patient. These can include discontinuation symptoms (Lejoyeux & Ades, 1997; Moncrieff, 2006a, 2006c), marked psychological and somatic symptoms (e.g. anxiety, insomnia and dizziness), and even seizures (Fialip et al., 1987). Moreover, there may be a risk of relapse of the underlying condition.

The qualitative study within this work confirms the findings of previous studies, which have shown that denial of medication following entry to prison causes significant distress (Bowen
et al., 2009; Condon et al., 2007; Douglas et al., 2009; Plugge et al., 2008). High levels of anxiety and distress have been observed among newly received prisoners with and without a formal mental illness (Hassan et al., 2011a). Indeed, a third of all UK prison suicides occur within the first week in custody (Shaw et al., 2004). Furthermore, if medication is withdrawn without justification or against the wishes of the patient, it may contribute to feelings of powerlessness and mistrust, and could discourage prisoners from taking responsibility for managing their illness (Bowen et al., 2009). Given the potential distress, it may be worth considering whether entry into custody is the optimum time to make changes to longstanding medication regimes.

There may be occasions where managed discontinuation of medication is clinically appropriate. As the qualitative study highlighted (paper 4), doctors in prison may not necessarily agree with prescribing regimes initiated in the wider community. For example, many prisoners may enter custody dependent on benzodiazepines, either legally obtained on prescription or bought illicitly (RCGP, 2011). However, abrupt withdrawal of psychotropic medicines, without proper clinical management, is a clinically risky strategy. It is therefore recommended that current UK best practice guidelines should be followed, which advise stopping or reducing doses of psychiatric drugs on a gradual basis with careful monitoring (NICE, 2009a, 2009b).

7.5.3.1.2 Medicines reconciliation

In study one, it is possible that in a proportion of cases, medication needs following reception into custody were unintentionally overlooked or delayed. If this is the case, it may be that medicines reconciliation activities may require further attention. Usefully, there appears to be a wealth of existing guidance (under the heading of medicines reconciliation) relevant to developing effective systems for recording medication information among patients being admitted to hospital, which should be applicable to prison settings (NICE, 2007; National Prescribing Centre, 2008). Recommendations for standardising information-gathering procedures, establishing minimum data-sets of medication information and clarifying the roles and responsibilities of staff involved would appear to hold as much relevance for healthcare staff working in prisons as in hospitals. A recent national evaluation of health reception screening procedures suggested that both the content and mechanics of screening vary across the prison estate and require attention (Shaw et al., 2009a). Given the results of the current study, any rethink of health screening processes
should also take the opportunity to improve the quality and consistency of information collected about medicines.

Notably, there were differences in prescribing rates between establishments, suggesting local variation in practices and procedures. If individual prisons have developed systems that better support continuity and equivalence of care for prisoners with mental illness, this may be a cause for optimism, and fuller exploration of such local strategies is warranted to determine whether these ostensibly successful practices can be replicated elsewhere.

7.5.3.2 During imprisonment

7.5.3.2.1 Alternatives to psychotropic medicines

Study two showed there were high rates of psychotropic prescribing in prisons. Yet, prescriptions were often unaccompanied by a valid indication in patient clinical records, leaving unanswered questions regarding why such medicines were prescribed. The current study did not investigate the indications noted for psychotropic medicines prescribed to community patients. Therefore it is not possible to determine whether findings would be similar in community settings. However, in the context of wider concerns about overreliance on psychotropic prescribing in prisons and the misuse of such medicines (HM Inspectorate of Prisons, 2007; RCGP, 2011), the absence of prescribing rationale in so many cases is concerning.

One possibility is that there are few clinical alternatives to psychotropic medicines in prison settings. In the qualitative work (Paper 3), staff and some patients expressed concern regarding overreliance on psychotropic medicines. These findings are consistent with concerns raised in a recent thematic review by HM Chief Inspector of Prisons, which highlighted the problem of psychological dependency on medicines in prisons (HM Inspectorate of Prisons, 2007).

Although staff and patients valued access to appropriate drug treatments for mental illness in prison, none viewed sole reliance on medicines, in themselves, as appropriate. In the prison mental healthcare literature there have been several calls to improve access to primary mental healthcare services, psychological therapies and even non-health activities in order to improve mental health (Bradley, 2009; HM Inspectorate of Prisons, 2007). The
findings of this thesis arguably add further support to this agenda. Given staff concerns regarding overreliance and misuse in relation to hypnotics and other medicines with sedative effects, interventions to improve sleep hygiene may be a particularly welcome addition.

7.5.3.2.2 Clinical record keeping

The findings of this study also suggest that the standard of clinical record keeping needs to be improved in prisons. It is possible that psychotropic medicines were withdrawn (study one) or prescribed (study two) appropriately, for reasons not identified by this study. However, prescribing rationales were poorly documented, particularly for antipsychotics (study three). Even if decisions are clinically appropriate, it is good practice to record justification for prescribing decisions in patient notes (Tully & Cantrill, 2006). In particular, the presence of a valid indication, recorded in the clinical record, is regarded as a key criterion of appropriate prescribing (Cantrill, 2000; Hanlon et al., 1992).

Doctors and healthcare staff in prisons undoubtedly work in challenging environments, with a complex group of patients. High levels of distress, comorbidity and distrust among prisoners all contribute to the difficulty of effectively identifying, assessing and treating mental illness. However, in this environment it is arguably even more important to keep comprehensive, unambiguous clinical records with clear justification for prescribing decisions. Failure to maintain accurate and clear records places clinicians at risk of criticism, is a hindrance to continuity of care and provides little protection in medico-legal investigations (Pullen & Loudon, 2006). Furthermore, noting the symptoms, severity and features associated with mental illness is important to inform treatment and track ongoing responses to treatment.

Recently, the roll-out of a national prison IT system (SystmOne) was completed, which may provide further opportunities to improve the quality and consistency of clinical record keeping. In particular, it would be useful if records systems between prison and community were better able to communicate with each other, harmonising the exchange of information, including prescriptions. In 2004, the quality and outcomes framework (QOF) was introduced as part of the General Medical Services Contract (Department of Health, 2003a) to remunerate community-based GPs for providing high-quality care and in high priority clinical areas. Notably, QOF includes clinical indicators for depression, which
incentivise targeted use of antidepressants for patients with more severe symptoms via the use of validated questionnaire assessment tools (NICE, 2012). The Department of Health has indicated it might consider a ‘QOF-like’ system for prisons (Department of Health, 2008). Currently, separate performance indicators, which take into account the different health needs of prison populations, are in use (Department of Health, 2008). Unlike QOF, however, these are not financially incentivised. Such measures could encourage better record keeping and help to improve the detection and treatment of mental illnesses.

7.5.3.2.3 Training needs

The qualitative study found that some healthcare staff felt pressured by prison discipline staff to treat individuals without evidence of mental illness. Further work may be needed to clarify matters, however this could signify a potential training need. If so, the NHS and HM Prison Service should consider how they can provide, or improve upon, provision of mental health awareness training available to among discipline staff.

Possibly, it could also indicate confusion regarding the role of prison mental health services, which has been previously noted (Brooker, 2005; Steel et al., 2007). Further clarification on the role of in reach services in supporting prisoners with personality disorders may be useful, especially as such individuals can pose particular management problems.

7.5.3.3 Preparation for release

7.5.3.4.1 Rehabilitation

In the qualitative study, healthcare staff talked about the role of psychotropic medicines in supporting the rehabilitation of mentally ill prisoners and preparing them for reintegration into society. In order to further enhance these benefits, prisons could explore how prisoners approaching their release date could be further supported to increase responsibility over their medicines in prison. This could include permitting them to store and administer their medicines themselves ‘in possession’, encouraging patients to order repeat prescriptions and increasing the duration of supply of medicines provided at any one time. Whilst not appropriate for all patients (for example, those at risk of self-harm, misuse, trading, bullying or non-adherence), for many it could help to foster a sense of
independence and responsibility, paving the way for a smooth transition to accessing healthcare services in the community.

7.5.3.4 Overarching themes

7.5.3.4.1 Communication and teamwork

Study one showed that prescriptions for psychotropic medicines were often changed or discontinued on entry to prison. The qualitative study, however, reported that patients did not always understand the reasons for medication changes and highlighted communication problems between patients, prescribers and other healthcare staff. Furthermore, it was apparent that changes, delays or disruption in the supply of psychotropic medicines could trigger considerable frustration and, potentially, disorder. Thus, prescribers in prison may wish to consider the ways in which medication changes are negotiated and communicated.

Communication skills have long been considered an important part of training in general practice (RCGP, 1972). If, as the UK Government intends, shared decision making is to become the norm in primary care (Department of Health, 2010b, 2012), prescribers in prisons may need to have more timely and transparent communications about medicines with patients. Whilst it might not always be possible to avoid patients being disappointed, greater patient involvement in making decisions about their care could reduce the potential for conflict, misunderstanding and patient dissatisfaction.

The qualitative study also highlighted the role of teamwork in making decisions about psychotropic prescribing in prison. Thus, prison healthcare teams may also wish to consider how prescribing decisions are communicated among themselves, including pharmacy staff, mental health workers and staff attending the medication hatch. This may help to improve the quality, consistency and timeliness of information provided to patients. Furthermore, given that most prisoners serve short sentences before being released, any changes to medication or other aspects of care whilst in prison arguably also have implications for healthcare professionals who care for offenders in the community. In order to guarantee continuity of care for these individuals, effective systems must be in place to communicate decisions about medicines between healthcare professionals based in prisons and their colleagues in the community; otherwise, any improvements to prescribing regimens may be lost during transitions. If prisons were able to enhance communication and information sharing with community prescribers in their locality (including mental health and substance
misuse teams), this could have the potential to improve the continuity of care at critical transitions, including entry to, and release from, prison.

7.5.3.4.2 Equivalence of care

A final point concerns the principle of equivalence, which states that prisoners should expect the same range and quality of services as the general public receives from the NHS (Health Advisory Council for the Prison Service, 1997). This thesis has highlighted issues with the way in which the principle of equivalence can be interpreted and utilised in the context of psychotropic prescribing decisions. In relation to prescribing, there are also subtle differences in how equivalence has been interpreted in the broader literature. For example, prison mental health policy clearly states that medication for mental disorder should not be automatically withdrawn on entry into prison without proper clinical assessment (Department of Health & HMPS, 2001). Yet, a report on safer prescribing in prisons has stated that equivalence is not ‘sameness’ (RCGP, 2011), indicating that prisons are not simply be expected to replicate community prescribing practices. This raises questions about the meaning and utility of the equivalence principle in practice.

Whilst this study has focused on a specific area of practice, the notion that patients, health professionals and policy makers may interpret the principle of equivalence differently arguably has broader implications for prison healthcare. Equivalence has been a useful reference point for driving forward modernisations in prison healthcare over the last twenty years (HM Prison Service and NHS Executive, 1999; Wilson, 2004b). However, in prisons there are clearly environmental, historical and cultural factors to be taken into account, which mean that aspects of healthcare (including medicines management) might look different to those in the wider community, adding to the difficulty in making effective comparisons. Several authors have argued that to reduce health inequalities, higher standards of care are required in prisons beyond those provided in the wider community (Exworthy et al., 2011; Lines, 2006; Niveau, 2007). Now that integration of prison healthcare into the wider NHS has been achieved, it might be timely to consider alternative criteria, such as those described by Exworthy et al. (2011), which can be used to drive forward standards in care.
7.5.3 Contribution to knowledge

This mixed methods study has provided a useful contribution to an area of clinical importance in which there has been little published research. To the best of my knowledge, it is the only study in to have explicitly set out to examine psychotropic prescribing, rather than mental illness, in prisons in England and Wales. In particular, the following aspects of the study are novel:

- **Study one** (paper one) quantified the proportion of medicines continued on entry to custody; although two studies have done this previously (HM Inspectorate of Prisons, 2000; Shaw et al., 2006), the current study was unique in discerning the factors associated with discontinuation of medication.

- **Study two** (paper two) provided estimates of psychotropic prescribing rates in prisons; these are the most detailed figures to be produced in England since the 1997 ONS survey (Singleton et al., 1998). Furthermore, study two arguably includes the most robust comparison of psychotropic prescribing rates between prisons and the community yet.

- **Study three** (paper three) was the first to empirically examine perspectives on the role of psychotropic prescribing in prisons. It found that psychotropic prescribing was thought to have multiple purposes in prisons, beyond simply treating the symptoms of mental illness, which were perceived differently by patients and healthcare staff.

- **Study three** (paper four) used a discursive perspective, a very uncommon approach in prison healthcare settings, to examine the patient and doctor accounts of changes to medication in imprisonment. This study builds on previous research by examining the specific discursive practices used to account for psychotropic prescribing decisions in prison settings, showing how the principle of equivalence can be utilised or challenged in practice.
7.5.5 Directions for future research

Psychotropic prescribing within the context of mental healthcare and medicines management in prisons remains a controversial, but relatively unexplored area. This section will briefly consider some of the possible directions for future work.

One of the most important areas for development is in the area of prescribing appropriateness. Assessing the appropriateness of prescribing is difficult (Barber, 1995), arguably even more so in the field of psychiatry, where the use of pharmacological treatment remains controversial (Cowen, 2011). Whilst the current study identified one of these indicators, namely the indication/diagnoses recorded, other factors, such as dose, drug-drug interactions and personal characteristics need to be taken into account. Indicators of appropriate prescribing have been developed which are based on data routinely collected in medical records (Cantrill et al., 1998; Hanlon et al., 1992).

More detailed work on exploring the patterns of prescribing among particular demographic groups would also be useful. Particular concerns have already been expressed regarding the high rates of psychotropic prescribing among women (HM Inspectorate of Prisons, 2007). It would also be worth considering prescribing patterns among older prisoners, a rapidly growing demographic group in prison with distinct health, social care and security requirements (Fazel et al., 2004; Yorston & Taylor, 2006).

The qualitative study yielded significantly more data than it was possible to analyse within the available time constraints. Several possible avenues for future work in this area (possibly using the same data). Firstly, there is potential to explore patient accounts of non-adherence or misuse of psychotropic medication in prison; this is a rich and interesting area that was unfortunately outside the confines of this thesis. There is also potentially interesting work to be done regarding constructions of patient identity, substance misuse and access to psychotropic medication, particularly in the context of previously research that has suggested health professionals may regard such groups as less ‘deserving’ of care (Rogers et al., 2007). Lastly, the current study used an interview-based approach. However, if an opportunity became available to analyse the patient–doctor interaction directly in prison (using recordings of consultations), this may allow a more enhanced understanding of how GPs negotiate requests for medication, how pressure can be resisted or exerted by patients and how prescribing decisions are executed in interaction.
Since prisons do not exist in total isolation, it would be useful to consider prescribing practices for offenders (and possibly other socially excluded groups) with mental illness in the wider community. As offenders move between settings, information and responsibility for meeting mental healthcare needs are passed between prison, GPs and other healthcare professionals in the community. Thus, any changes to prescribing in prisons would arguably have greater impact with the cooperation of health professionals in the community.

Developing an improved understanding about the particular issues involved in working with offenders and ex-offenders in community healthcare settings could help to improve communication and the continuity of care for these individuals. Indeed, many of the issues encountered in prison healthcare appear to be common to socially excluded groups in general.

The author of this study is part of a team of co-applicants (including her supervisors and colleagues at the University of Manchester and Keele University) who have recently gained funding from the UK National Institute of Health Research (Health Services and Delivery Research programme to undertake a national study of psychotropic prescribing patterns in prison (Box 9, page 219). This study will take the opportunity to address some of these recommendations for future research by considering prescribing among specific demographic groups and will also establish the appropriateness using validated indicators (Cantrill et al., 1998).
Box 9: A study of psychotropic medication prescribing patterns in prisons in England and Wales

Research questions
1. What are the patterns of psychotropic medication prescribing in prisons in England and Wales, and how do these compare to the wider community?
2. How appropriately are psychotropic medications prescribed in prisons?
3. How acceptable are psychotropic medication prescribing decisions to patients and GPs in prisons?

Objectives
1. To establish rates of prescribing for psychotropic medications (antidepressants, antipsychotics, hypnotic/anxiolytics and/or central nervous system stimulants) in prisons in England and Wales with respect to a) medication type b) dose and c) cost.
2. To compare prison psychotropic prescribing patterns with the wider community, accounting for demographic and clinical characteristics.
3. To compare prescribing patterns between different prison types and specific demographic groups, including women, older prisoners and BME groups.
4. To determine the appropriateness of psychotropic prescribing patterns in prisons.
5. To determine the perceived satisfaction and acceptability of psychotropic prescribing decisions to patients and GPs in prisons.

What this study adds
Currently the OHRN is investigating patterns in prescribing for mental health problems within prisons in the East of England. This study will extend our initial work to cover a representative range of prisons throughout England and Wales. We have also added a questionnaire component to the study to examine patient and GP satisfaction with prescribing decisions made in prisons. We will look at the types, strengths and costs of medicines used to treat mental health problems in prison and compare them to medicines used in the wider community. We will also investigate patient expectations of prescribing in prison for mental health problems, and measure patient satisfaction with prescribing decisions. The final report will make a series of recommendations aimed at improving the equity and quality of psychotropic medication prescribing in prisons in line with current NHS guidance, and will identify any cost savings to be made, for example by reducing the number of inappropriate and unnecessary and unwanted prescriptions.
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9. Appendices

9.1 Appendix A: Prisoners holding their own medications during imprisonment in England and Wales: a survey and qualitative exploration of staff and prisoners’ views.

Copyright statement


Abstract

Background: Traditionally, medication in prison has been administered in single, supervised doses. Latterly, however, prisons in England and Wales have been encouraged to allow prisoners to hold and manage their own medication themselves, ‘in-possession’, in line with community practices.

Aims: We aimed to examine the range of policies and practices used to manage in-possession medication in prisons, and to explore staff and patient perspectives.

Methods: A mixed methods design was selected. Questionnaires were sent to all prisons throughout England and Wales in 2008 and follow-up interviews were completed with 68 staff and 24 patients at 12 prisons.

Results: In-possession medication was permitted to some degree within all establishments. Interviewees identified empowerment as the principal benefit of in-possession medication, whilst acknowledging the need to minimise health and security risks. Structured methods of risk assessment were used in 93% of establishments, although content and structure varied widely.

Conclusions and implications for practice: There is still some way to go before in-possession medication policies are fully embraced by prisons. Staff and patients recognise the benefits of in-possession medication, but some remain uneasy around the perceived risks. Risk management processes in some establishments may still require development.
Key messages:

- Prisoners should be given their medication to hold and manage themselves ‘in-possession’, unless individual risk assessment indicates otherwise.
- While staff recognise the advantages of in-possession medication, achieving the optimum balance between security, safety and empowering patients is difficult in practice.
- Robust methods of risk management in relation to in-possession medication may help prisons move from being ‘risk averse’ to ‘risk aware’.

Keywords: medicines, prison, in-possession, pharmacy

Background

Physical and mental health problems are more common amongst prisoners than the general population; 46% of adult male sentenced prisoners reported having a long standing illness or disability (Bridgwood & Malbon, 1995) and 90% have a diagnosable mental health or substance misuse problem (Singleton et al., 1998). Therefore, a high level of need for medication in prisons is to be expected.

Traditionally, medication in prison has been administered in single, supervised doses, adopting practices more akin to inpatient settings than the community. More recently prisons have been encouraged to work towards a default position whereby prisoners, like the wider public, are routinely issued with medication ‘in-possession’, to hold and manage themselves, unless individual risk assessments indicate this should not be the case (Department of Health, 2003b). However, some staff working within prisons remain uneasy, based on notions that in-possession medication may increase the risk of drugs being abused, traded, stolen or used to self-harm via overdose (Bradley, 2007).

We aimed to examine the range of policies and practices used to manage in-possession medication in prisons throughout England and Wales, and to explore the experiences of staff and patients.
Methods

We used a mixed methods design, combining: (1) a questionnaire survey; and (2) qualitative interviews with patients and healthcare, discipline and managerial staff in prisons.

Questionnaire survey

A questionnaire was developed, comprising open and closed questions addressing the following topics: in-possession medication policies, limited prescribing lists, risk assessment tools and medication storage facilities. The questionnaire was piloted and sent to healthcare managers at all prisons throughout England and Wales initially during June 2008, followed by written and telephone reminders to non-responders. A 90% response rate was achieved for the questionnaire survey (Table 1).

Interviews

Twelve establishments, geographically spread and representing a range of prisoner populations, were purposively selected for interviews (Table 2). As a minimum, we attempted to interview the following ‘key informants’ at each prison: the governor/deputy; the healthcare manager and/or primary care manager; a member of the pharmacy team; a member of nursing staff; a prison officer; and at least two prisoners, including at least one prescribed medication in-possession. During June to November 2008, 68 staff and 24 prisoners were interviewed (Table 2). At six prisons, researchers conducted interviews in person in private rooms in healthcare or residential wings. Researchers worked in pairs and used a semi-structured interview schedule covering experiences of in-possession medication, perceived challenges and benefits. Interviews were audio recorded where permitted by establishments; alternatively, notes were taken by the second researcher. Audio recorded telephone interviews were conducted at the remaining six prisons with staff only.

Analysis

Survey data were entered into SPSS and analysed using descriptive statistics. Qualitative interview data were analysed using a thematic approach, allowing us to provide feedback to prison practitioners in a clear, accessible manner (Braun & Clarke, 2006). Our analytical approach followed a three-stage method (Miles & Huberman, 1994) involving data reduction, data display and conclusion drawing/verification. Due to the large number of interviews completed, not all audio recordings were transcribed in full. Researchers listened to all recordings and reduced interviews to the most salient points and extracts.
Handwritten notes were read and summarised in a similar manner. Interview summaries were then read and carefully compared by two researchers in order to jointly identify patterns and anomalies, and to code content for themes. Themes were also mapped visually to facilitate conclusion drawing and to illustrate inter-relationships. Transcripts were revisited to verify themes and select illustrative extracts, enriching the analysis. Finally, the resulting analysis was reviewed, refined and verified by the whole team to ensure the conclusions drawn were credible, valid and adequately supported by the data.

*Ethical considerations*

All interviewees gave informed consent and took part voluntarily. Relevant research approvals were gained from a research ethics committee, the NHS and HM Prison Service.

*Results*

All survey respondents reported that in-possession medication was permitted to some degree within their establishments (Table 3). Follow-up interviews explored staff and patient perspectives on how in-possession medication was managed in practice. The combined analysis of staff and patient interviews yielded three overarching themes: empowerment, risk and risk management (Figure 1). Each theme will be explored in turn, integrating survey findings where relevant.

*Empowerment*

Empowerment was viewed as the primary benefit of increasing the availability of in-possession medication. Giving patients responsibility over when and how to take their medicines was frequently described as a way of encouraging greater independence, personal responsibility and control over medicines use, ultimately leading to improved health. Whilst there were exceptions, health and discipline staff were generally supportive of this approach:

> Prisoners should have their medication in-possession... that’s coming from my core beliefs that we’ve got to enhance their autonomy and independence and get them to take charge of their own care treatment. (Mental health manager, Prison A)
Staff recognised that increased use of in-possession medication could also empower themselves. Reducing time staff spent on dispensing and supplying medication to patients, allowed them to make more appropriate use of their skills:

\textit{Nurses spend far too much time giving out medication rather than being nurses.} 
(Pharmacist, Prison L)

Two interrelated subthemes were commonly used to support the empowerment theme, and to justify increasing use of in-possession medication: equivalence of care and preparation for release. If patients were given responsibility for their own medicines in prison, as they routinely were in the wider community, it would support greater ‘equivalence of care’; a principal driver behind recent prison healthcare reform (Wilson, 2004b). Additionally, it would serve as useful preparation for community living, allowing patients to get into a routine in the relatively secure and structured environs of the prison in advance of their release. The following comment was typical:

\textit{It actually gives the prisoner a certain amount of control over their illness or their treatment... they are taking the responsibility on for themselves. Healthcare is supposed to reflect inside the prison what happens outside of the prison.} (Mental health nurse, Prison H)

In agreement with staff opinion, empowerment was also reflected in patients’ own accounts, who valued the opportunity to exert control over this aspect of their healthcare. However, patients framed their reasons for wanting control differently, often as an attempt at ‘normality’, separating their healthcare needs from offending, or to reduce the inconvenience of queuing for and collecting medication:

\textit{It makes you feel normal. I’m not a monster, so I should get my inhaler.} (Patient, Prison L)

\textit{Having it is better than coming down for it every day, it would be a pain coming then.} (Patient, Prison F)

\textbf{Risk}

Enthusiasm for increasing in-possession medication policy, among staff in particular, was tempered by discussion of security and health risks. With respect to security, staff were extremely conscious of the potential for misuse, trading and diversion associated with certain medications, particularly those with psychotropic, sedative or analgesic properties. Some staff were very suspicious of some patients’ motives for wanting in-possession medication:
[In-possession medication] can only be a good thing if they can be trusted to have it, but a lot of these would sell their granny for a few extra cigarettes. (Prison officer, Prison A)

Staff also noted that in-possession medication might heighten the risk of bullying, if vulnerable patients in receipt of certain valued medicines were targeted by other prisoners. However, despite such concerns, less than half of establishments had addressed it via provision of specific storage facilities for in-possession medication (Table 3); just 20% (n=8) of adult male local prisons serving courts provided storage facilities. Several patients noted this as a significant limitation:

I don’t think there is any benefit of anyone having their own medication...unless there was a safe place to keep them in your pad [cell]. (Patient, Prison A)

From a health perspective, some staff expressed fears that medicines could be collected and ‘hoarded’, carrying a risk of overdose. A further concern was that certain patients, particularly among those with mental health problems or learning disabilities, might not have the skills to take their medicines properly, risking damage to their health. One patient denied in-possession medication acknowledged this had affected risk decisions, commenting:

I’ve missed it twice and both times they’ve come looking for me and told me it’d very dangerous for me not to take it, ’cause I could have a fit. (Patient, Prison E)

Risk management

Risk management was routinely a key aspect of in-possession medication policies and was identified as a strong theme that ran through the accounts of all types and grades of staff. Staff viewed risk as something that could be managed or minimised, but not completely eliminated.

A good, robust system should minimise risks. (Healthcare manager, Prison F)

You’ll never get rid of risk totally. (Reception nurse, Prison G)

We identified three interrelated strategies that influenced approaches to risk management in relation to in-possession medication: risk assessment, monitoring and calibration.

1. Risk assessment
Survey responses (Table 3) indicated that prisons often used structured risk assessments (93%), limited prescribing lists (68%) or, commonly, a combination of both (66%) to assess suitability for in-possession medication. Six prisons (5%) used neither of these. We requested copies of risk assessment tools and received 56 different examples: 26 (46%) resembled assessment forms, comprising mostly closed questions; twenty (36%) used points systems, yielding a final aggregate risk score; and ten (18%) resembled flow charts, with no dedicated space to record observations or outcomes. In terms of content, tools commonly assessed (ranked in decreasing order of frequency): risk of self harm/suicide, vulnerability to bullying, ability to understand instructions, previous known security breaches (e.g. trading) and current mental state.

Two thirds (68%) of prisons identified medications that, due to clinical or security risks, could not normally be given in-possession (Table 3). Although the examples received (n=36) varied between prisons, there was broad agreement regarding what medications were considered unsuitable for in-possession or deemed 'higher risk'. This commonly included controlled drugs (e.g. methadone), opiate-based analgesics and mental health medications, particularly benzodiazepines, antipsychotics and tricyclic antidepressants. Conversely, some prisons specified medications routinely permitted for in-possession, including antibiotics, antihistamines and certain antidepressants (particularly selective serotonin reuptake inhibitors).

2. Monitoring
Staff and patients described a variety of mechanisms for monitoring use of medicines given in-possession. Formal procedures included written contracts signed by patients before receiving medication in-possession, random cell searches by security staff and medication counts designed to check the patient’s remaining supply corresponded with expected use. Additionally, healthcare staff frequently monitored adherence to medication regimes, noting whether medication was collected and the timing of requests for medication. Both discipline and healthcare staff were keen to stress the importance of interacting with patients and remaining vigilant:

   It is about knowing the prisoners and talking to them. That is the biggest thing, it’s about how you find them at the time. (Prison officer, Prison H)

3. Calibration
The flexibility of risk management approaches varied between individual establishments. Several interviewees conceptualised risk in dynamic terms, highlighting that a person’s level
of risk may fluctuate in response to mental well-being, the environment and/or other life stressors. In the words of one interviewee:

A risk assessment is only as good as the time that you make it. (Healthcare manager, Prison I)

However, the extent to which this was recognised in the approaches of individual establishments was variable. In some establishments risk assessment was largely considered to be a one-off process, sometimes completed upon initial reception into custody; in others it was ongoing. Establishments with more flexible approaches to in-possession medication ruled out fewer drugs and appeared able to continuously adapt, or ‘calibrate’ approaches to individuals, varying the duration of supply to be given at any one time, the level of support required and the frequency of monitoring and risk assessments. Conversely, inflexibility invoked frustration among some patients:

It’s the drug, not me! They’d be better off assessing individual cases rather than having a blanket ban. (Patient, Prison F).

Summary: health in the balance

Figure 1 concisely displays how the rhetoric of empowerment was inevitably juxtaposed against recognition of the health and security risks of introducing in-possession medication into a secure environment. Risk management was identified as the vehicle to negotiate this conflict via risk assessment, monitoring and calibration. To manage risk, prisons adopted different positions on a continuum of approaches, with the most cautious establishments making in-possession medication available to fewer prisoners, in lower quantities, for fewer medicines. More flexible establishments incorporated feedback mechanisms to ‘calibrate’ and personalise care in response to the outcomes of ongoing assessment and monitoring. In spite of reference to in-possession medication as a positive way of empowering patients to take responsibility for their health, ultimately staff expressed judgments of the effectiveness of in-possession arrangements in more negative terms, focusing on the absence of mistakes:

We haven’t had any major incidents or real problems there so I think it ... is effective
(Healthcare manager, Prison D)
However, it was common for staff to voice frustrations that fears commonly associated with in-possession medication were exaggerated and the prison environment and culture resulted in perhaps an overly cautious approach to in-possession medication:

*Some people do get rather upset and agitated about it but the incident of death by overdose is very low. Plus, if they were in the community they would have a cupboard full of tablets anyway.* (Healthcare manager, Prison A)

*Somedtimes we’re too cautious, more cautious than other prisons.* (Mental health nurse, Prison E)

Conclusions

In 2003, 92% of prisons in England and Wales had in-possession medication policies (Department of Health, 2003b). Our survey indicated this has increased to 100%. Interviews showed that both staff and patients recognised the benefits of in-possession medication, mostly conceptualised in terms of empowerment, balanced against against the potential health and security risks. Risk management approaches used within individual establishments varied in terms of content, structure, flexibility and complexity.

Strengths and limitations

Confidence can be drawn from the high response rate to this survey (90%). However, these results were reliant on self-report data and the professional knowledge of the particular person completing the questionnaire. Whilst we collected and examined a wide range of policies, risk assessments and limited prescribing lists from individual establishments, a significant proportion of respondents did not return any such evidence. Furthermore, we did not access dispensing data in order to accurately determine the proportions of medication given in-possession. Unavailability of high quality pharmacy data in prisons has previously been recognised as a problem (Department of Health, 2003b). The qualitative study included a relatively large and varied sample of interviewees; however, it was primarily conducted in prisons which received prisoners directly from court. These findings might be less generalisable to other types of prisons where populations are more stable, although we note that survey responses between interviewed and non-interviewed prisons were similar (Table 3).
Balancing the benefits and risks

Whilst there were exceptions, most people interviewed were positive about the use of in-possession medication. Patients and staff welcomed the opportunity for increased patient autonomy over their medicines, albeit for subtly different reasons. Staff framed benefits in terms of encouraging personal responsibility and providing equivalent care, echoing key policy guidance (Department of Health, 2003b; National Prescribing Centre, 2005b). Previous qualitative studies have reported that prisoners value control over their medicines (Bowen et al., 2009; Douglas et al., 2009); in our study this was expressed in terms of convenience and fostering a sense of normality. Healthcare staff also identified benefits for themselves; indeed, opportunities for skills development have previously been identified in establishments that have embraced in-possession medication policies (Simpson & Shah, 2006).

Risk was a powerful rhetoric that permeated the accounts of all types of staff. Staff consistently demonstrated concern for security and safety risks, which were sometimes echoed by patients. Risk management, understandably, is a strong theme in the wider literature concerning in-possession medication (National Prescribing Centre, 2005b; Pike, 2005; Wayman, 2006). National Prescribing Centre (NPC) guidance on in-possession medication practices in secure environments (NPC, 2005b) does not recommend the use of any single risk assessment tool. Rather, establishments were advised to develop bespoke, ‘fit for purpose’ tools to suit individual profiles and populations. This study confirms that the vast majority of prisons in England and Wales have developed structured methods of risk assessment, although these varied widely in terms of content and structure.

Risk is a dynamic concept, therefore ongoing monitoring of patients is essential to respond to changes in risk and to evaluate risk decisions (Pike, 2005). Risk assessments were sometimes carried out at prison reception; given the likely state of mind of individuals arriving into custody, this might not offer a true reflection. To our knowledge, none of the risk assessment tools in use had been validated; rather, effectiveness appeared to be judged less formally on the absence of adverse incidents involving in-possession medication. Levels of satisfaction with risk management processes among staff were mixed, with a number of individuals at different establishments claiming arrangements were outdated, overcautious or insufficiently responsive.
Implications

Prisoners should be given their medication in-possession as a matter of principle, unless individual, dynamic risk assessments indicate otherwise. In theory, the benefits of in-possession medication far outweigh the disadvantages (Bradley, 2007; Pike, 2005), however some staff remain cautious. Whilst some progress has been made, our findings show that, in relation to managing medication in prisons, balancing the competing concerns of security, safety and health remains a difficult and complex business for practitioners and patients alike (Wayman, 2006).

If prisons are to move further towards in-possession medication as the default position, a major challenge will be altering negative perceptions and progressing from a generally risk averse culture to one that is risk aware (Bradley, 2007). Whilst acknowledging the point that prisons vary (NPC, 2005b), there would now appear to be an opportunity to support prisons by collating and sharing best practice examples in medication risk assessment. Furthermore, improving in cell medication storage facilities where practicable, may reduce real or perceived threats regarding security. Robust monitoring and dispensing data are essential to evaluate any changes thoroughly and to enhance confidence in procedures.

Acknowledgements

We are indebted to staff and patients at participating prisons who made the research possible. We also thank David King, Naomi Mwasambili and Matthew Sanderson for their assistance with data collection. This research was funded by Offender Health at the Department of Health. However, the views expressed in this publication are the authors’ own.
Table 1: Questionnaire survey response rate

<table>
<thead>
<tr>
<th>Prison type</th>
<th>Survey respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
</tr>
<tr>
<td>Adult male local</td>
<td>40</td>
</tr>
<tr>
<td>Adult male open</td>
<td>12</td>
</tr>
<tr>
<td>Adult male sentenced</td>
<td>47</td>
</tr>
<tr>
<td>YOI male</td>
<td>14</td>
</tr>
<tr>
<td>Female</td>
<td>14</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>127</strong></td>
</tr>
</tbody>
</table>

Table 2: Interview sample characteristics

<table>
<thead>
<tr>
<th>Prison characteristics</th>
<th>N</th>
<th>Interviewee characteristics</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Population</strong></td>
<td></td>
<td><strong>Prisoner patients</strong></td>
<td></td>
</tr>
<tr>
<td>Adult male local (A-E)</td>
<td>5</td>
<td>Men</td>
<td>21</td>
</tr>
<tr>
<td>Adult male sentenced (F)</td>
<td>1</td>
<td>Women</td>
<td>3</td>
</tr>
<tr>
<td>YOI male (G-I)</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female (J-L)</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Staff role</strong></td>
<td></td>
<td><strong>Governor/ Deputy</strong></td>
<td>6</td>
</tr>
<tr>
<td>Region in England</td>
<td></td>
<td>Healthcare management</td>
<td>14</td>
</tr>
<tr>
<td>Northern</td>
<td>5</td>
<td>Primary care (inc. GPs)</td>
<td>11</td>
</tr>
<tr>
<td>Midlands</td>
<td>3</td>
<td>Mental health nursing</td>
<td>7</td>
</tr>
<tr>
<td>London and Southern</td>
<td>4</td>
<td>First reception nursing</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Pharmacy</td>
<td>7</td>
</tr>
<tr>
<td><strong>Security level</strong></td>
<td></td>
<td>Substance misuse</td>
<td>4</td>
</tr>
<tr>
<td>Medium</td>
<td>11</td>
<td>Prison officer</td>
<td>9</td>
</tr>
<tr>
<td>High</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>12</strong></td>
<td></td>
<td><strong>92</strong></td>
</tr>
</tbody>
</table>

YOI; Youth Offender Institution

Table 3: Questionnaire survey key findings, by prison respondent type

<table>
<thead>
<tr>
<th>Question</th>
<th>Survey respondents</th>
<th>Interview &amp; survey respondents</th>
<th>All</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Do you allow in-possession medication within your establishment?</td>
<td>115 (100)</td>
<td>12 (100)</td>
<td>127 (100)</td>
</tr>
<tr>
<td>2. Does your establishment have a list of medication that cannot be given in-possession?</td>
<td>78 (68)</td>
<td>8 (67)</td>
<td>86 (68)</td>
</tr>
<tr>
<td>3. Do you provide specific storage facilities for patients with in-possession medication within your establishment?</td>
<td>52 (45)</td>
<td>4 (33)</td>
<td>56 (44)</td>
</tr>
<tr>
<td>4. Do you have a structured method for assessing prisoners’ suitability to receive medication in-possession?</td>
<td>108 (94)</td>
<td>10 (83)</td>
<td>118 (93)</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>115 (100)</strong></td>
<td><strong>12 (100)</strong></td>
<td><strong>127 (100)</strong></td>
</tr>
</tbody>
</table>
References


9.2 Appendix B: NOMS approval

Dr Susan Wishart
Chair of the NRC
Business Change Group
BCG Building Tel 01759 475074
Full Sutton
[PERSONAL DETAILS ANONYMISED]
YORK YO41 1PS

Jenny Shaw
3rd March 10
Offender Health Research Network
Jean McFarlane Building (2nd Floor)
University of Manchester
Oxford Road
[PERSONAL DETAILS ANONYMISED]
Manchester, M13 9PL

Title: A study of psychotropic medication prescribing patterns in English prisons

Reference: 06/10

Establishments: [ANONYMISED]

Dear Jenny,

Further to your application to undertake research in HM Prison Service and our letter dated 17th February 10. The NRC is pleased to grant approval in principle for your research, subject to compliance with the conditions outlined below:

- Approval from the Governor of each Establishment you wish to research in.  
  Please note that NRC approval does not guarantee access to Establishments, access is at the discretion of the Governor and subject to local operational factors and pressures
- Compliance with all security requirements.
- Compliance with the requirements of the Data Protection Act 1998.
- Informing and updating the NRC promptly of any changes made to the planned methodology.
- It being made clear to participants verbally and in writing that they may withdraw from the research at any point and that this will not have adverse impact on them.
- The NRC receiving an electronic copy of any research report submitted as a result of the research with an attached executive summary of the product of the research.
- The NRC receiving an electronic copy of any papers submitted for publication based on this research at the time of submission and at least one month in advance of the publication.
- Researchers are under a duty to disclose certain information to the Prison Service. This includes behaviour that is against prison rules and can be adjudicated against (see Section 51 of the Prison Rules 1999), illegal acts, and behaviour that is harmful to the research participant (e.g. intention to self-harm or complete suicide). Researchers should make research participants aware of this requirement.

Once the research is completed, and received by the NRC Co-ordinator, it will be lodged at the Prison Service College Library.

Yours sincerely

Dr Susan Wishart
Chair of the NRC
Business Change Group
9.3 Appendix C: Ethics approval

National Research Ethics Service
Northern and Yorkshire Research Ethics Committee

Appendix C: Ethics approval

Ethical review of research sites

The favourable opinion applies to all NHS sites taking part in the study, subject to management permission being obtained from the NHS/HSRC 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 organization prior to the start of the study
- The study must be conducted in accordance with local ethical guidelines

Sponsors are not required to notify the Committee of approvals from host organizations.

It is the 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).

Approved documents

The documents reviewed and approved at the meeting were:

<table>
<thead>
<tr>
<th>Document</th>
<th>Version</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Covering Letter</td>
<td></td>
<td>11 November 2009</td>
</tr>
<tr>
<td>REC application</td>
<td>IRAV 2.5</td>
<td>11 November 2009</td>
</tr>
<tr>
<td>Protocol</td>
<td>V1.0 - 16 pages</td>
<td>11 November 2009</td>
</tr>
<tr>
<td>Investigator CV</td>
<td>Professor Jenny Shaw</td>
<td>11 November 2009</td>
</tr>
<tr>
<td>Investigator CV</td>
<td>Lamnne Hassan</td>
<td>11 November 2009</td>
</tr>
<tr>
<td>Letter of invitation to participant</td>
<td>V1.0</td>
<td>11 November 2009</td>
</tr>
<tr>
<td>Participant Information Sheet</td>
<td>V1</td>
<td>11 November 2009</td>
</tr>
<tr>
<td>Participant Information Sheet: Staff views</td>
<td>V1</td>
<td>11 November 2009</td>
</tr>
<tr>
<td>Participant Consent Form</td>
<td>V1</td>
<td>11 November 2009</td>
</tr>
<tr>
<td>Interview Schedules/Tapas Guides</td>
<td>Prisoner Patients V1</td>
<td>11 November 2009</td>
</tr>
<tr>
<td>Evidence of insurance or indemnity</td>
<td>V1 letter from Dr Richard Sharburn</td>
<td>04 November 2009</td>
</tr>
<tr>
<td>Letter from Dr Mary Pigh</td>
<td>Approval letter DeH</td>
<td>10 September 2009</td>
</tr>
<tr>
<td>Referees or other scientific critique report</td>
<td>Letter from Roger W Webb or Scientific Review</td>
<td>26 August 2009</td>
</tr>
<tr>
<td>Referees or other scientific critique report</td>
<td>Support letter from Denise Farmer/Rob Jayne, NHS East of England</td>
<td>25 August 2009</td>
</tr>
</tbody>
</table>
ISAC EVALUATION OF PROTOCOLS FOR RESEARCH INVOLVING GPRD DATA

FEED-BACK TO APPLICANTS

CONFIDENTIAL

do by e-mail

PROTOCOL NO: 10_048R
APPLICANT: Prof. Jenny Shaw MB ChB FRCPsych MSc PhD, Professor of Forensic Psychiatry/Honorary Consultant Forensic Psychiatrist, Offender Health Research Network, University of Manchester

APPROVED [ ] APPROVED SUBJECT TO MINOR AMENDMENT [ ] REVISION/RESUBMISSION [ ] REJECTED [ ]
(resubmission not required) [ ]

COMMENTS:

Protocol 10_048R is approved.

ACCESS TO GPRD DATA UNDER THE MRC LICENCE

ELIGIBLE [ ] INELIGIBLE [ ]

COMMENTS:

DATE: 21 May 2010

1 Where access to GPRD data under the MRC licence is granted, this is subject to the protocol being approved (with or without comments recommendation) by ISAC.
### Appendix E: Study 1 data collection sheet

![Audit Tracking Form](image)

#### A: Reported Medication Needs at Reception:

1. What prescribed medication did the patient report being in receipt of immediately prior to custody? Please state each drug below.

<table>
<thead>
<tr>
<th>Drug</th>
<th>Dose</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2. At reception is the patient noted as (tick as many as apply):

- Ever having been in contact with community mental health (MH) services
- Having been in contact with mental health services immediately prior to custody
- Ever having been an inpatient in a psychiatric hospital
- Ever having received medication for a mental health problem
- Having brought their medication with them
- Having been in contact with a drug service immediately prior to custody
- Having recently been hospitalised/ had an operation

#### B: Prescription Verification:

3. Is there any evidence of the prison contacting the community prescriber to confirm the patient's medication needs?

   - No
   - Yes

<table>
<thead>
<tr>
<th>Prescriber:</th>
<th>Date:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

4. Is there any evidence of the prison having received a response from the community prescriber?

   - No
   - Yes

<table>
<thead>
<tr>
<th>Date:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>

If response was received, report the outcome for each drug reported in Q1:

<table>
<thead>
<tr>
<th>Drug 1:</th>
<th>Drug 2:</th>
<th>Drug 3:</th>
<th>Drug 4:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### C: Psychiatric Assessment & Medication Review in Prison:

5. Please state all medications (or substitutes) px within a month of reception:

<table>
<thead>
<tr>
<th>Drug</th>
<th>Dose</th>
<th>Date first px</th>
<th>Px type</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

6. For any medications confirmed but not prescribed, state why not:

7. Did a mental health assessment take place within a month of reception?

   - No
   - Yes

<table>
<thead>
<tr>
<th>a) Date:</th>
<th>b) With whom:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Outcome:

Please tick if medication was discussed:

8. Within a month of reception, is the patient ever noted as (tick as many as apply):

- Seeing the GP (post-reception)
- Seeing the prison psychiatrist
- Being under the care of in-reach
- Being under CPA
- Being on a CCCT

Completed by: [Signature]

Data inputted: [Date]
9.6 Appendix F: Study 2 data collection sheet

**PRESCRIBING SURVEY: DATA ENTRY FORM**

<table>
<thead>
<tr>
<th>INITIALS OF PERSON COMPLETING FORM</th>
<th>Confirm the patient meets the eligibility criteria before proceeding.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>The patient was in custody on the prevalence day.</td>
</tr>
<tr>
<td></td>
<td>The patient had a valid prescription for psychoses,</td>
</tr>
<tr>
<td></td>
<td>hypnotics/anxiolytics, antidepressants and/or CNS</td>
</tr>
<tr>
<td></td>
<td>stimulants or other drugs used for ADHD (BNF 4.1-4.4)</td>
</tr>
<tr>
<td></td>
<td>covering on the prevalence day.</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>HMP PATIENT RESEARCH ID NUMBER</td>
<td></td>
</tr>
</tbody>
</table>

**A. DEMOGRAPHIC INFO (LIDS)**

1. Gender
   - [ ] Male
   - [ ] Female
2. Legal status
   - [ ] Convicted
   - [ ] Remand
3. Ethnicity
   - [ ] Black
   - [ ] White
   - [ ] Asian
   - [ ] Mixed
   - [ ] Chinese/other
4. Year of birth
   - [ ] 19
   - [ ] 9
   - [ ] __/__/___
5. Date received into custody (at this prison on current charge)
   - [ ] __/__/___
6. Date discharged from custody (leave blank if still in)
   - [ ] __/__/___

**B. MEDICAL HISTORY (EMIS/SYSTM ONE)**

6. State all medical conditions identified in the reception screen/second healthcare screen (tick as many as apply).
   - [ ] BMI 30+
   - [ ] Diabetes
   - [ ] Epilepsy
   - [ ] Heart/respiratory disease
   - [ ] Kidney failure
   - [ ] Liver failure/hepatitis
   - [ ] Pregnancy
   - [ ] Alcohol abuse
   - [ ] Drug abuse
   - [ ] Mental health problems
   - [ ] Self harm/suicide risk
   - [ ] No reception screen and no second screen available.

**C. PRESCRIPTIONS (EMIS/SYSTM ONE)**

7. Please list all drugs which the patient had a valid prescription (px) for on the prevalence day.

<table>
<thead>
<tr>
<th>Drug name</th>
<th>Px daily dose (mg/m)</th>
<th>Formulation (please circle)</th>
<th>Is there a clear diagnosis/indication for this drug in the notes?</th>
<th>Drug continued from previous px? (Please circle)</th>
<th>Date of 1st px for this drug in prison</th>
<th>Prescriber</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td>TABLET, DISP/SUBL, LIQUID, DEPOT</td>
<td>No / Yes</td>
<td>If yes, what?</td>
<td>No / Yes</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
<td>TABLET, DISP/SUBL, LIQUID, DEPOT</td>
<td>No / Yes</td>
<td>If yes, what?</td>
<td>No / Yes</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
<td>TABLET, DISP/SUBL, LIQUID, DEPOT</td>
<td>No / Yes</td>
<td>If yes, what?</td>
<td>No / Yes</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
<td>TABLET, DISP/SUBL, LIQUID, DEPOT</td>
<td>No / Yes</td>
<td>If yes, what?</td>
<td>No / Yes</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
<td>TABLET, DISP/SUBL, LIQUID, DEPOT</td>
<td>No / Yes</td>
<td>If yes, what?</td>
<td>No / Yes</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td></td>
<td>TABLET, DISP/SUBL, LIQUID, DEPOT</td>
<td>No / Yes</td>
<td>If yes, what?</td>
<td>No / Yes</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td></td>
<td>TABLET, DISP/SUBL, LIQUID, DEPOT</td>
<td>No / Yes</td>
<td>If yes, what?</td>
<td>No / Yes</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td></td>
<td>TABLET, DISP/SUBL, LIQUID, DEPOT</td>
<td>No / Yes</td>
<td>If yes, what?</td>
<td>No / Yes</td>
<td></td>
</tr>
</tbody>
</table>
9.7 Appendix G: Data analysis log

SETUP

Data files

<table>
<thead>
<tr>
<th>Table</th>
<th>Description</th>
<th>N</th>
<th>N variables</th>
<th>Key variable</th>
</tr>
</thead>
<tbody>
<tr>
<td>PET_Therapy001</td>
<td>Prescriptions</td>
<td>15,095,300</td>
<td>14</td>
<td>ID</td>
</tr>
<tr>
<td>PET_Therapy002</td>
<td>Prescriptions</td>
<td>10,175,027</td>
<td>14</td>
<td>ID</td>
</tr>
<tr>
<td>PET_Patient001</td>
<td>Patients</td>
<td>67,615</td>
<td>21</td>
<td>patid</td>
</tr>
<tr>
<td>PET_Practice001</td>
<td>GP Practice details</td>
<td>431</td>
<td>4</td>
<td>pracid</td>
</tr>
<tr>
<td>SES_2010_10</td>
<td>GP Practice SES</td>
<td>593</td>
<td>3</td>
<td>pracid</td>
</tr>
</tbody>
</table>

Lookup files

<table>
<thead>
<tr>
<th>Lookup file</th>
<th>Description</th>
<th>N</th>
<th>N variables</th>
<th>Linking variable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bnfcodes</td>
<td>BNF codes</td>
<td>961</td>
<td>2</td>
<td>bnfcodes</td>
</tr>
<tr>
<td>Common_dosages</td>
<td>Dose details</td>
<td>56,114</td>
<td>11</td>
<td>textid</td>
</tr>
<tr>
<td>Product</td>
<td>Product details</td>
<td>43,811</td>
<td>9</td>
<td>prodcode</td>
</tr>
<tr>
<td>ddd</td>
<td>WHO’s defined daily dosage</td>
<td>414</td>
<td>5</td>
<td>prodcode</td>
</tr>
</tbody>
</table>
# ANALYSIS LOG

<table>
<thead>
<tr>
<th>Step</th>
<th>Query</th>
<th>Purpose</th>
<th>Procedure</th>
<th>Output</th>
<th>N records</th>
</tr>
</thead>
</table>
| 1    | 001   | Get all individual prescriptions between 1st Feb-30th July 2010 | • Using Therapy 1 file, add criteria to eventdate [>31/01/2010 AND <31/07/2010]  
• Include patid, procode, bnf, eventdate and therapy ID (count) in output  
• Repeat above for Therapy 2 file  
• Merge Therapy1 - 1112971.dta & Therapy2 - 755662.dta | Therapy1 - 1112971.dta  
Therapy2 - 755662.dta  
Therapy 1 & 2 1868633.dta | 1,112,971  
755,662  
1,868,633 |
| 2    | 002   | Get all individual prescriptions for BNF 4.1 | • Using Therapy 1 & 2 1868633, lookup product codes  
• Add criteria to bnfchapter:  
[Like "*Hypnotics*"] OR  
[Like "*Anxiolytics*"] OR  
[Like "Barbiturates"]  
• Export to Excel to remove midazolam, alimemazine, and promethazine injection (prod code 35846) and only used in anaesthesia drugs  
• Copy results into Excel to count patids | 0401 pats.txt  
0401 px.txt | 25,246  
(12,648 from region 6)  
115,691 |
| 3    | 003   | Get all individual prescriptions for BNF 4.2 | • Using Therapy 1 & 2 1868633, lookup product codes  
• Add criteria to bnfchapter:  
[Like "*Antipsychotic*" or Like "*Antimanic"] | 0402 pats.txt  
0402 px.txt | 18,551 patients  
(7,671 from region 6)  
101,437 |
| 4    | 004   | Get all individual prescriptions for BNF 4.3 | • Using Therapy 1 & 2 1868633, lookup product codes  
• Add criteria to bnfchapter:  
[Like "*antidepressant*"] OR  
[Like "*MAOIs*"] OR  
[Like "*Tricyclic*"] OR  
[Like "*serotonin"] | 0403 pats.txt  
0403 px.txt | 45,213 patients  
(28,728 from region 6)  
230,457 |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th>Get all individual prescriptions for BNF 4.4</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>005</td>
<td>Using Therapy 1 &amp; 2 1868633, lookup product codes</td>
<td></td>
<td>0404 pats.txt</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Add criteria to bnfchapter: [Like &quot;<em>CNS</em>&quot;]</td>
<td></td>
<td>0404 px.txt</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1,217 patients 6,226</td>
</tr>
<tr>
<td>6</td>
<td>STATA</td>
<td>Get all individual prescriptions between 1st Feb-30th July 2010 for BNF 4.1 to 4.4</td>
<td>Import each sheet into stata and then use the append command to merge all four sets of prescriptions on px id</td>
<td>Therapy 0401 to 0404 px - 6 months.txt</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Drop duplicates (n==118) - these occur where a drug appears in more than one bnf chapter e.g. triptafen</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>STATA</td>
<td>Identify all prescriptions without dose duration information</td>
<td></td>
<td>Therapy 0401 to 0404 px - 6 months.txt</td>
</tr>
<tr>
<td></td>
<td></td>
<td>create new binary variable ‘gprddose’ to identify whether each prescription has dose info (ndd=1) or not (ndd=0)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Save to Therapy 0401 to 0404 px - 6 months.txt</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Use access to export details to Excel about drugs without dose duration info (gprddose =0), inc. product name, substance and product code</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>453,693 90,491</td>
</tr>
<tr>
<td>8</td>
<td>EXCEL</td>
<td>Identify the range of product codes and generic drug names for prescriptions without dose duration information</td>
<td>Sort by product code</td>
<td>Q006.xlsx</td>
</tr>
<tr>
<td></td>
<td></td>
<td>List in sheet 2 all drug substance names and associated product codes</td>
<td></td>
<td>Q006.xlsx (sheet 2)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>92 different drug substances</td>
</tr>
<tr>
<td>9</td>
<td>EXCEL</td>
<td>Identify DDDs for each separate drug name without dose info identified</td>
<td>Identify DDDs for each separate drug and product code using <a href="http://www.whocc.no/atc_ddd_index/">http://www.whocc.no/atc_ddd_index/</a></td>
<td>ddd.txt</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Save as ddd.txt</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>n/a</td>
<td>Divide Therapy 0401 to 0404 px - 6 months.txt into 2</td>
<td>Divide on basis of response to the gprddose variable (0 vs. 1)</td>
<td>Q007.txt (with dose info)</td>
</tr>
<tr>
<td></td>
<td>STATA</td>
<td></td>
<td></td>
<td>363,202 90,491</td>
</tr>
</tbody>
</table>

28 I decided to use DDDs to estimate prescription duration in cases where the ndd was missing, because there were too many cases to just delete missing data (20%) and this method is commonly used in the prescribing literature. I used the WHO’s DDDs rather than the UK version (ADQs) as they covered more of my drugs of interest

29 I used Stata to create new variable and then imported the worksheet into Access to perform the query.
<table>
<thead>
<tr>
<th>Step</th>
<th>Software</th>
<th>Description</th>
<th>Input</th>
<th>Output</th>
</tr>
</thead>
<tbody>
<tr>
<td>9</td>
<td>STATA</td>
<td>Using Q007.txt, create new variable prescription duration (pxduration) for px with dose info</td>
<td>• Create variable <code>pxduration</code>: <code>gen pxduration=qty/ndd</code></td>
<td>• Q008.txt (without dose info)</td>
</tr>
<tr>
<td>10</td>
<td>STATA</td>
<td>Using Q008.txt, create new variable prescription duration (pxduration) for px without dose info</td>
<td>• Add ddd.txt file to Q008  • Pxduration created using following formula: <code>gen pxduration =(strength/ddd)*qty</code></td>
<td>• Q007 - with dose info.dta</td>
</tr>
<tr>
<td>11</td>
<td>STATA</td>
<td>Merge Q006.txt (with dose info) and Q008.txt</td>
<td>• Merge using append command in stata  • Save as Q009</td>
<td>• Q009.txt</td>
</tr>
</tbody>
</table>
| 12   | STATA    | Remove all px that ended prior to 30/07/07 | • gen pointprev=pxdate + pxduration  
(NB 30Jul2010= 18473 in stata date format)  
Remove all px that ended prior to 30/07/07 using drop | • Q010.txt/dta | 68,480 prescriptions |
| 13   | 006      | Count all patients with a prescription for BNF 4.1-4.4 on 30/07/2010 | • Import Q010.txt to Access  • Include patid and id(count) in output  • run duplicates check | • yob.txt |
| 14   | STATA    | Create variable to breakdown patients by bnf chapter | • Use Q010 in stata  • Merge using 6 month bnf chapter px files (created in steps 2-5)  • Merge with individual chapter, use _merge to identify point prev px and repeat for each subchapter  • Create binary variables to identify px in each chapter (hyp, antipsych, antidep and stim) | • Q010.txt/dta | 68,480 prescriptions |
| 15   | 007      | Create age group variable | • Remember yob = 1800 + value, so to get the yob add 1800 to year e.g. 1800 +185 = 1985  • link Q010 to PET_Patient001  • Include id and yob in output | • yob.txt |
- Run query and export to stata
- Use stata to create new variable agecat

<table>
<thead>
<tr>
<th>16</th>
<th>008</th>
<th>Breakdown prescriptions by drug and bnf chapter</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>• Use Q010 and link with product</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>13,600 (4.1)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>12,927 (4.2)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>40,798 (4.3)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1,177 (4.4)</td>
</tr>
</tbody>
</table>
### 9.8 Appendix H: Factors associated with discontinuation of psychotropic medicines following imprisonment

Comparison of factors noted in patient clinical records among discontinued and continued psychotropic prescriptions following imprisonment $^a, b$

<table>
<thead>
<tr>
<th>Factor</th>
<th>Discontinued (N=112)</th>
<th>Continued (N=128)</th>
<th>$\chi^2$</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Psychiatric assessment within 1 week of reception</td>
<td>12 (11) 100 (89)</td>
<td>16 (13) 112 (88)</td>
<td>.185</td>
<td>.667</td>
</tr>
<tr>
<td>Disconfirmation from community prescriber</td>
<td>23 (21) 89 (79)</td>
<td>4 (3) 124 (97)</td>
<td>18.136</td>
<td>.000</td>
</tr>
<tr>
<td>Prescription of substitute medication</td>
<td>19 (17) 93 (83)</td>
<td>0 (0) 128 (100)</td>
<td>23.581</td>
<td>.000</td>
</tr>
<tr>
<td>Discharge within 1 week of reception</td>
<td>23 (21) 89 (79)</td>
<td>9 (7) 119 (93)</td>
<td>9.427</td>
<td>.002</td>
</tr>
<tr>
<td>Patient refusal</td>
<td>2 (2) 110 (98)</td>
<td>0 (0) 128 (100)</td>
<td>2.305</td>
<td>.129</td>
</tr>
<tr>
<td>Any</td>
<td>64 (57) 48 (43)</td>
<td>27 (21) 101 (79)</td>
<td>32.976</td>
<td>.000</td>
</tr>
</tbody>
</table>

$^a$ For the purposes of this study, only the presence of each factor within patient clinical records was recorded on data collection forms. Therefore, in this study there was no distinction between a) no record of an event or prescription in the clinical record and b) ‘missing’ data. It is possible this strategy may have led to underestimation of prescribing and other clinical events (e.g. psychiatric assessment). For example, if a psychiatric assessment was completed, but there was no mention of this in the clinical record, this case would be indistinguishable from cases where no psychiatric assessment had taken place.

$^b$ Percentages may not add up to 100% due to rounding.
9.9 Appendix I: Staff interview schedules

1. Role and background
   • Can you tell me a bit about your role here at the prison?
   • How are you involved with the process of prescribing, dispensing or administering medication in this prison?

2. Identifying medication needs
   • What kinds of medication needs do prisoners commonly present with at this prison?
     - How are these typically dealt with?
   • What happens when a prisoner arrives into custody and states that they are currently receiving medication for mental health problems?

3. Prescribing
   • What kinds of benefits are associated with being able to prescribe appropriate medications for prisoners with mental health problems?
   • What kinds of factors influence the types of medicines that you are able to prescribe in this prison?
     - Are these the same factors that would influence prescribing to patients living in the community?
   • Are you able to prescribe the same types of medications as you can to patients outside of prison?
     - Are there times when you are unable to prescribe certain medications in prison that you think might benefit patients?
   • Are you able to prescribe the same dosages as you can to prisoners outside of prison?
   • Have there been times where your prescribing decisions have been challenged?
   • If there are any restrictions on prescribing in this prison, how appropriate do you think these are?

4. Risk management
   • What are the main types of risks that are associated with prescribing psychotropic medication for prisoners at this prison?
   • How do you assess and manage risks associated with medication here at this prison?
• Is assessing risk for these patients in prison the same as it is for patients outside of prison?

• Overall, how well do you think risk in relation to medication is assessed and managed here at this prison?

5. Patient focus

• To what extent are patients’ views taken into account in the prescribing process in this prison?
  - Is this a similar level as they would be in the community?

• How do you deal with patients that are unhappy with prescribing decisions?

• In what ways are patients given autonomy to manage their own medication needs in this prison?

• How well do you think patients that require medication for long-term mental health problems are managed in this prison?

• To what extent is ‘in-possession’ medication allowed at this prison?
  - Do you think the prison has got the balance right between patient autonomy and security?

• Do you monitor compliance or adherence to medication?

• How well do you think patients that require medication for long-term mental health problems are managed in this prison?

6. Pharmacy and medicines management

• Which types of staff are involved with managing medication here at this prison?

• What kinds of pharmacy services are available at this prison?

• Are you involved in decisions regarding the types of medication that staff are allowed to prescribe here at the prison? E.g. formularies

• How do you keep up to date with changes in policy and guidance relating to medications?

• Do you receive any ongoing training or development at this prison to support you in your medicine management/ prescribing responsibilities?

OR
• Do you provide any ongoing training or development at this prison to support other staff in their medicine management/ prescribing responsibilities?

• How could you be better supported in your prescribing responsibilities?

7. Release and beyond
• What happens when a prisoner is due to leave custody and needs to continue receiving medication for mental health problems after their release (outside of prison)?

• What links do you have with prescribers working in the community?

8. Summary
• In terms of medication, to what extent is there continuity of care between this prison and the community?

• Overall, how do you think this prison compares to others in terms of the quality of prescribing?

• How could prescribing be improved in this prison?

• That’s all the questions I have to ask you. Is there anything else that you’d like to talk about in relation to prescribing that we haven’t already covered?

Thanks and debrief.
9.10 Appendix J: Patient interview schedules

1. Personal background
   *To start off I want to ask you a bit about yourself.*
   - How old are you?
   - How long have you been at this prison?
   - Is this your first time in prison?
   - Have you got a job in prison or are you involved in training/education?

2. Experiences with health services outside of prison (community)
   *First I’d like to talk to you about your health care before you came into prison.*
   - Were you seeing anyone for help with mental health problems outside of prison?
     - What kind of help did they give you?
     - How regularly did you see them?
   - Were you taking any regular medication before you came into prison?
     - How did you find this?
   - Who sorted out your medication for you outside of prison?
     - Who prescribed it? (GP? Mental health team?)
     - How regularly did you have to see them?
     - What were they like? How did they treat you?

3. Early custody experiences
   *Now I’d like to talk to you about your experiences when you first came into custody.*
   - When you first came into prison, do you remember speaking to a member of healthcare staff at reception, such as a nurse?
     - What kinds of questions did they ask you?
     - Did they ask you questions about your mental health?
     - Did they ask you any questions about medication?
   - Did you speak to a doctor at reception?
     - What kinds of questions did they ask you?
     - Did they ask you questions about your mental health?
     - Did they ask you any questions about medication?
     - Did they prescribe (give) any medication for you?
     - If so, what?
   - Have they sorted out your medication in this prison?
     - What happened?
     - Who helped you?
- How long did it take? Was there anything that slowed down the process or made it harder for you to get your medication?
- How did you feel during this time?

4. Care arrangements in prison
- What help have you had for your mental health problem in this prison?
- Have you seen a doctor in this prison?
  - Do you see the same doctor regularly?
  - What are they like? How do they treat you?
- Do you see a mental health/inreach nurse in this prison?
  - Do you see the same person regularly?
  - What are they like? How do they treat you?

- How much influence do you feel you have when it comes to decisions about your care in this prison?

5. Current medication arrangements
- What medication are you currently taking?
  - What do you take this for?
  - Who prescribes this for you?
  - How regularly?
  - How long have you been taking this?
- How happy are you with the medication that you are currently taking?
  - How does it help you?
  - Are there any problems with your medication or things that you don’t like?
  - Were you given any alternatives to taking (this) medication?
- How much were you told about the medication when it was first given to you?
  - Do you feel that you know enough about it?
- How much influence do you feel you have when it comes to decisions about your medication in this prison?
- Have there been times where you have disagreed with your doctor about your medication?
  - If yes, what about?
  - How was this sorted out?
- If you weren’t happy about your medication at the moment, what would you do about it?
  - Who would you talk to?
- Has your medication ever been reviewed or changed?
  - What happened?
6. Patient autonomy

- How much responsibility do you have for managing your own medication at this prison?
  - Was this the same for you outside of prison?
- Do you feel able to take responsibility for making sure you get your medication at the right times?

- What would happen if you weren’t able to take your medication?
  - Have there been times where you haven’t been able to take it?

- Do you keep your medication yourself or is it given to you every day?
  - Are there any downsides to this or drawbacks?

- How well do you think patients that need medication for mental health problems are managed in this prison?

7. Security and safety

- Do you have to take part in any special security checks or measures due to being on medication in this prison?

- Are there times where you feel under pressure or at risk as a result of being on prescribed medication in this prison?

- Do you think the prison has got the balance right between security and giving patients responsibility for looking after their own medication?

8. Release and beyond

- When you leave this prison, do you know how you will go about getting your medication in the community?
  - Has anyone in this prison spoken to you about this?
  - Would you want any help with this?

9. Summary

- Overall, are there differences between being a patient in the community and being a patient in a prison?

- When it comes to medication, how could things be improved for people with mental health problems at this prison?

- Overall, how do you think this prison compares to others in terms of the way medication issues are handled?

- That’s all the questions I have to ask you. Is there anything else that you’d like to talk about in relation to prescribing that we haven’t already covered?

Thanks and debrief.
9.11 Appendix K: Staff information sheet

Introduction
My name is Lamiece Hassan. I am part of a research group at the University of Manchester, Department of Psychiatry. At the moment we are working on a project that will explore differences in psychotropic medication prescribing patterns between prisons and communities in England.

Why is the purpose of this study?
Previous research has shown that there may be differences between prison and community settings in the types of psychotropic medications prescribed for prisoners and the prescribing process itself. In the short-term the study findings will be used to inform local prescribing policies and medicines management. In the longer term findings will contribute to the evidence base on improving access to medicines for prisoners with mental health problems.

Why have I been invited?
As a member of staff involved with the prescribing process and/or those prisoners receiving these medications (whether or not you actually prescribe medications), we want to speak to you about your views on psychotropic medication use in prisons. We are also asking other prisoners and staff from this prison to take part in the study.

Do I have to take part?
No, taking part is voluntary. If you would prefer not to take part you do not have to give a reason and no pressure will be put on you to try and change your mind. You can change your mind about taking part at any time. If you decide not to take part, or withdraw at any stage, your professional role or prospects will not be affected.

What will I have to do if I take part?
If you agree to take part in the study, you will take part in an individual interview. Questions will depend on your job role but it is likely that you will be asked about your own role in the prescribing process, the factors which influence prescribing in this prison and your experiences of managing prisoners in receipt of psychotropic medications. I will also ask you about how you think prisons could improve the way in which they manage people on psychotropic medications.

This will take around 45 minutes of your time. The interview will take place at your workplace, at a time convenient for you. I will ask you for permission to record the interview using a voice recorder. Only the research team will hear the tapes. I will also ask
for your permission to use anonymous quotes in publications arising from this study. Your name will not be printed in any publication.

Will my taking part in the study be kept confidential?

All the information you give us from the interview is confidential and will be used by the research team for this study only. Any data about you will be made anonymous and used in a way that will not allow you to be identified individually. We will also keep a copy of your signed consent form, stored separately from your interview data, for up to 10 years after the study has finished.

What do I do now?

Think about the information on this sheet and ask me about anything that you are not sure about. If you agree to take part, please get in touch with me and I will arrange a convenient time to interview you.

Who is funding and organising the study?

This study is being funded by Offender Health at the Department of Health. The study is being organised by University of Manchester.

Who has reviewed the study?

All research in the NHS is looked at by independent group of people, called a Research Ethics Committee, to protect your interests. This study has been reviewed and given favourable opinion by Northern and Yorkshire Research Ethics Committee (ref: 09/H0903/54).

What if there is a problem?

Complaints
If you have a concern about any aspect of this study, you should ask to speak to the researchers who will do their best to answer your questions. If they are unable to resolve your concern or you wish to make a complaint regarding the study, please contact a University Research Practice and Governance Co-ordinator on 0161 2757583 or 0161 2758093.

Harm
In the event that something does go wrong and you are harmed during the research you may have grounds for a legal action for compensation against The University of Manchester and but you may have to pay your legal costs. The normal National Health Service complaints mechanisms will still be available to you.
9.12 Appendix L: Patient information sheet

Introduction

My name is Lamiece Hassan. I am part of a research group at the University of Manchester, Department of Psychiatry. At the moment we are working on a project that will look at what happens to people who need to take regular prescribed medication (that is, from a doctor or trained nurse, not including any illegal drugs) for mental health problems when they come into prison.

We would like to invite you to take part in our research study. Before you decide, we would like you to understand why the research is being done and what it would involve for you. I will go through the information sheet with you and answer any questions you have. This should take about 15 minutes. Ask me if there is anything that is not clear.

What is the purpose of this study?

Previous research has shown that there may be differences in the way that medication is prescribed in prisons when compared to community settings. We are doing this study to find out your views on how well this prison manages prisoners who need to take regular prescribed mental health medication, and to see how this compares to your past experiences of taking medication in the community. This study will help to decide if the way that medication is prescribed in prisons needs to be improved for your benefit.

Why have I been invited?

You are being asked to take part because you have experience of being prescribed medication for a mental health problem. We are also asking other prisoners and staff from this prison to take part in the study.

Do I have to take part?

No, taking part is voluntary, and you do not have to do it. If you would prefer not to take part you do not have to give a reason and no pressure will be put on you to try and change your mind. You can change your mind about taking part at any time. If you decide not to take part, or withdraw at any stage, your legal and parole rights and your access to medical care will not be affected.

What will I have to do if I take part?

If you agree to take part in the study, you will take part in an individual interview. During this interview I will ask you about your experience of how your medication needs have been handled by this prison, including questions about what prescribed medication you might be on now, or have been prescribed in the past. I will also ask you questions about how you have been involved in making decisions about the medication you take and how you think
prisons could improve the way that they manage people on medication. This interview will take around 45 minutes of your time.

I will ask you for permission to record the interview using a voice recorder and to use things that you say in the interview in the final report. Only the research team will hear the original recordings. I will also ask your permission to access your medical records to gather information about the medication you have been prescribed and the reasons for this. Your name or any identifiable information will not be printed in any report.

**What are the possible disadvantages and risks of taking part?**

What you say during the interview is up to you, but you may find it uncomfortable when I ask you questions about your mental health or experiences in prison. You can choose not to answer questions or end the interview at any time if you wish.

**What are the possible benefits of taking part?**

There is no personal benefit to you, but the information we get from this study will help improve the treatment of people prescribed mental health medication in prison.

**Will my taking part in the study be kept confidential?**

All the information you give us from the interview is confidential and will be used by the research team for this study only. Any information about you which leaves the prison will be made anonymous so that you cannot be recognised. We will also keep a copy of your signed consent form, stored separat

*The only exception to this is if, after the interview, we feel your health or safety, or that of others around you is at immediate risk because of something you have told us about how you are feeling. In that case, we will have to pass that information on to the prison healthcare staff, so that they can help you further.*

**What do I do now?**

Think about the information on this sheet and ask me about anything that you are not sure about. You now have at least 24 hours to decide if you want to take part. Talk to others about the study if you wish. If you agree to take part, tell your personal officer who will then contact me and we will go ahead.

**If I need to see someone about the research after I have taken part who can I contact?**

If, after taking part in the research, you want further information or have any more questions about the study, tell your personal officer who will then contact me and I will come back to see you.
But if after taking part, you become upset and need help immediately to deal with your feelings without hurting yourself, it is very important that you talk to someone straight away.

Any member of staff in the prison will be able to help you; all you need to do is speak to someone. Please do this as soon as you start feeling upset, it will help.

**Who is funding and organising the study?**

This study is being funded by Offender Health at the Department of Health. The study is being organised by University of Manchester.

**Who has reviewed the study?**

All research in the NHS is looked at by independent group of people, called a Research Ethics Committee (REC), to protect your interests. This study has been reviewed and given favourable opinion by Northern and Yorkshire REC.

**What if there is a problem?**

*Complaints*

If you have a concern about any aspect of this study, you should ask to speak to the researchers who will do their best to answer your questions. If they are unable to resolve your concern or you wish to make a complaint regarding the study, please contact a University Research Practice and Governance Co-ordinator on 0161 2757583 or 0161 2758093.

*Harm*

In the event that something does go wrong and you are harmed during the research you may have grounds for a legal action for compensation against The University of Manchester and but you may have to pay your legal costs. The normal National Health Service complaints mechanisms will still be available to you.

THANK YOU FOR READING THIS
9.13 Appendix M: Staff consent form

STAFF CONSENT FORM

NAME ________________________________

I confirm that I have read and understood the attached information sheet and have had the opportunity to ask questions.

1. I understand that I can withdraw from the study at any time without having to give a reason.

2. I consent to the interview being audio recorded.

3. I consent to anonymous direct quotes being used in the final report and other study publications.

4. I understand that relevant sections of my data collected during the study may be looked at by individuals from the University of Manchester, from regulatory authorities or from the NHS Trust, where it is relevant to my taking part in this research. I give permission for these individuals to have access to this data.

5. I hereby give consent to be involved in this research project. I understand that there will be no negative impact on my professional role or prospects if I decide to withdraw at any time or not to participate.

_________________ ______________________
Signature of Participant Date

_________________ ______________________
Signature of Researcher Date
9.14 Appendix N Patient consent form

PATIENT CONSENT FORM

NAME _____________________________

6. I confirm that I have read and understood the attached information sheet and have had the opportunity to ask questions.

   OR I confirm that I have had the attached information sheet explained to me and have had the opportunity to ask questions.

7. I understand that I can withdraw from the study at any time without having to give a reason.

8. I consent to the interview being audio recorded.

9. I consent to anonymous direct quotes being used in the final report and other study publications.

10. I give permission for the research team to access my medical records.

11. I understand that relevant sections of my data collected during the study may be looked at by individuals from the University of Manchester, from regulatory authorities or from the NHS Trust, where it is relevant to my taking part in this research. I give permission for these individuals to have access to this data.

12. I hereby give consent to be involved in this research project. I understand that there will be no negative impact on the care I receive in prison if I decide not to participate.

_________________________________________ ________________
Signature of Participant Date

_________________________________________ ________________
Signature of Researcher Date