MENTAL HEALTH SERVICES AND PRISONERS: AN UPDATED REVIEW

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Contents

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INTRODUCTION - THE INITIAL TENDER

In 2001 a team from ScHARR at the University of Sheffield undertook a review of mental health services and prisoners. The broad aim of the review was outlined in the briefing paper that accompanied the call for tenders as follows:

'To carry out a systematic review of primary/ secondary research, including the grey literature, to appraise work related to the mental health problems of prisoners, relevant to the development of: prison primary care services; NHS community mental health services in-reaching into prisons; the clients to be referred and the services provided'

The original brief confirmed that the purpose of the review was to identify gaps in knowledge to inform the development of a prison mental health services research agenda.

The proposal that the team from ScHARR submitted originally argued that a three phase approach was required which included:

- A review of reviews with particular emphasis on systematic review which met strict quality criteria defined by the Centre for Reviews and Dissemination (CRD). This was later abandoned due to a paucity of literature.
- A review of the effectiveness literature according to CRD guidelines (Centre for Reviews and Dissemination, 2001)
- A review of models of good practice according to methods, at the time, being developed by the NHS SDO programme (Fulop et al.,2001). This was later broadened to become a review of literature relating to service delivery and organisation.

The team also proposed the design of a final stakeholder event where the findings would be accorded some sense of priority. The successful tender stated that:

'……this will provide a forum for the presentation of the results of the review of existing research and a number of focus groups will be facilitated to elicit the views of 'experts' about areas in which further research is needed and methodologies that might yield the most useful findings'

After meeting with their project Steering Group, the team at ScHARR also agreed to complete an epidemiological review of mental disorders in prisons to clarify the prevalence of major mental disorders in prisons. This would provide a context against which the findings of the review could be assessed. In addition, it was determined that the adequacy of research into interventions for prisoners with mental disorders of interventions could best be assessed in relation to interventions used to treat mental disorders in the general population. This further piece of work was therefore introduced, with the intention to provide an overview, not a comprehensive review of the evidence.

In 2006, the Prison Health Research Network (PHRN) commissioned a team at the University of Lincoln to update this review examining research between 2002 and September 2006. The findings of this research form the content of this updated review.

The structure of the original review developed as the literature search proceeded. Over 2,502 papers were identified in total. Blind selection by at least three reviewers led to 392 papers being obtained, all of which specifically referred to mental disorders in prison. 4335 papers were identified in the updated review, and independent selection by three reviewers led to 198 papers

being obtained.

In both reviews, two researchers then sorted these papers into the sections identified in the proposal: reviews, interventions and 'good practice' (those papers falling into more than one category were copied so that they could be included in all relevant sections of the review).

Review Structure

The review is presented in 5 sections. The first describes the aims, objectives and an overview of methods. It is, however, important to note that detailed search and review methods differed for each aspect of the review and are therefore included in the relevant sections of the report. Section 2 provides the background to the review including the strategic context and an epidemiological review of mental disorders in prisons. In the original review an overview of effective mental health interventions for the general population was included. An update of this section, however, was beyond the resources of this study. Section 2 concludes with a brief summary. Section 3 reviews research into interventions for prisoners with mental disorders, summarising the findings by diagnostic categories and making recommendations for future research. Section 4 reviews research into service delivery and organisational issues relating to prisoners who have mental disorders. The findings are discussed in Section 5. References for each section are given separately.

ABBREVIATIONS USED IN THE TEXT

APA	- American Psychiatric Association
APHA	- American Public Health Association
AUDIT	- Alcohol Use Disorders Identification Test
BDI	- Beck's Depression Inventory
BPD	- Borderline Personality Disorder
BPRS	- Brief Psychiatric Rating Scale
CBT	- Cognitive Behavioural Therapy
CCETSW	-.Central Council for the Education &Training of Social Workers
CCTR	- Cochrane Controlled Trials Register
CDSR	- Cochrane Database of Systematic Reviews
CIS	- Clinical Interview Schedule
CIS-R	- Clinical Interview Schedule – Revised
CJS	- Criminal Justice System
CMHT	- Community Mental Health Team
CPA	- Care Programme Approach
CPN	- Community Psychiatric Nurse
CRD	- Centre for Reviews and Dissemination
CRiB	- Current Research in Britain
DARE	- Database of Abstracts of Reviews and Effectiveness
DBT	- Dialectical Behavioural Therapy
DEC	- Development and Evaluation Committees
DofH	- Department of Health
DSM-IV	- Diagnostic and Statistical Manual of Mental Disorders
DSPD	- Dangerous and Severe Personality Disorder
EED	- Economic Evaluation Database
GP	- General Practitioner
HAC	- Health Advisory Committee
HAS	- Health Advisory Standards
HMIC	- Health Management Information Consortium
HMP	- Her Majesty's Prison
HoNOS	- Health of the Nation Outcome Scales
HTA	- Health Technology Assessment
MAOI	- Mono-amine Oxidase Inhibitors
MDO	- Mentally Disordered Offender
MHA	- Mental Health Act
NACRO	- National Association for the Care and Resettlement of Offenders
NCCHC	- National Commission on Correctional Health Care
NeLMH	- National electronic Library for Mental Health
NGC	- National Guidance Clearinghouse
NHS	- National Health Service
NICE	- National Institute of Clinical Excellence
NIMH(E)	- National Institute for Mental Health (Executive)
NRR	- National Research Register
NSF	- National Service Framework
ONS	- Office of National Statistics
OPCS	- Office for Population, Census and Surveys
PHRN	- Prison Health Research Network
PST	- Problem Solving Therapy

ReFeR	- Research Findings Register
SCAN	- Schedules for Clinical Assessment in Neuropsychiatry
ScHARR	- School of Health and Related Research, Sheffield University
SCID-II	- Structured Clinical Interview for DSM-IV
SDO	- Service and Delivery Organisation
SIGN	- Scottish Inter-Collegiate Guidelines Network
SSRI	- Selective Serotonin Reuptake Inhibitors
TCA	- Tri-cyclic Antidepressants
TRIP	- Turning research Into Practice
US	- United States
WHO	- World Health Organisation

EXECUTIVE SUMMARY
MENTAL HEALTH SERVICES AND PRISONERS: AN UPDATED REVIEW

Introduction

The broad aim of the 2001 review, as originally commissioned, was to undertake a systematic review of the primary and secondary research related to the mental health of prisoners. This was to appraise work relevant to the development of prison primary care services, NHS community mental health services in-reaching into prisons, the clients to be referred and the services provided. The review was to identify gaps in knowledge that might inform a prison mental health services research agenda.

The original proposal in 2001 had bid for a three-phase approach to include a review of reviews; a review of the effectiveness literature and a review of models of good practice. The Steering Group modified this approach to include an epidemiological review of mental disorders in prisons and a review of effective mental health interventions to be obtained from relevant up to date review and syntheses. In addition, a stakeholder conference was arranged to consult on the findings and to add clarity to the recommendations. The review's final structure emerged as the literature search proceeded. Over, 2,500 papers were identified and following blind selection by three reviewers 392 papers were obtained, reviewed and categorised. This led to further changes. The review of reviews was abandoned due to insufficient material. The section on 'Good Practice' was extended and renamed 'Service Delivery and Organisation'.

This review was then updated in 2006 by a team at the University of Lincoln who identified a further possibly relevant 4335 papers then obtained 198 of them, which they reviewed and categorised under the original headings.

1. Research Protocol

Aims and Objectives

The purpose of the original review was to provide a rigorous, systematic and comprehensive review of the relevant primary and secondary mental health literature in order to inform the development of services for prisoners with mental disorders.

Method

A systematic review of the literature on mental disorders in prisons was undertaken. Due to the nature of the topic under investigation, a three-phase approach was adopted. This included:

a) A (traditional) review of the epidemiology of mental health problems in prisons to supplement the background of the report.
b) A review of literature on interventions used to treat mental disorders in prisons, following the NHS Centre for Reviews and Dissemination (CRD) guidelines (NHS CRD, 2001)
c) A 'review of the literature on service delivery and organisational issues relating to mental disorders in prisons, following the methods developed by the NHS SDO Programme (Fulop et al., 2001)

Specific search, selection and structuring strategies were used and each of these are reported in each relevant section of the report. The same approach was used in this updated review. However, this review does not include an overview of the effectiveness of specific interventions for mental health problems within the general population.

2.Background to the Review

Strategic Context

The publication of 'The future organisation of prison health care' and 'The national service framework for mental health' (1999) strengthened efforts to improve the quality of mental health care received by prisoners. This is an enormous challenge with over 80,000 people in prison at any given time and as many as 90% having some kind of mental disorder (Singleton et al, 1998). The key principle of policy as been that prisoners should receive the same level of community mental health care within prisons as they would receive in the wider community, and this was exemplified by the fact that the NHS assumed responsibility for the provision of prison healthcare services in April 2006. 'Changing the outlook' (2001) recognised the need to plan more effective mental health services for prisoners that are locally commissioned, based on the assessment of health need, and which acknowledge the needs of particular groups, for example, young offenders. The document anticipated that by 2004, there would be 300 more staff providing in-reach services leading to 5,000 more prisoners receiving comprehensive care and treatment. This was in fact achieved – as there are now 90 in-reach teams operating across the country, employing c.350 staff. However, there is still a need for increased investment of resources in prison (mental) healthcare as prisoners remain more socially excluded than all other groups in society, with a higher risk of suicide and self-harm, plus a higher prevalence of serious mental illness than the general population.

Epidemiological Review

A 'traditional' review of the epidemiology of the prison population was undertaken in order to provide background to the subsequent systematic review of effective interventions for prisoners and service development and organisational issues. The search strategy is outlined fully in section 2.2.2 of the main report. Key data were extracted from the major prevalence studies and these findings are tabulated in Tables 2.1 and 2.2 of the appendix. Although the focus was on the UK literature key findings from the international literature are also presented and important differences between sentenced and remand and male and female prisoners are highlighted. Perhaps the most influential and comprehensive cross-sectional study to date is still the ONS Survey of Psychiatric Morbidity among prisoners in England and Wales (Singleton, 1998). Unlike previous epidemiological surveys the study was targeted at remand and sentenced prisoners and men and women. The results from this study are presented in some detail in this review but under the main various diagnostic headings. However, where relevant, the results from other studies are also presented to demonstrate the range of reported prevalence of major disorders. This variation can be explained by the use of various diagnostic tools employed in the studies but also by the unreliability of self-report for say the misuse of substances.

Eighteen new papers were included in the epidemiology section of this updated review. This constitutes 35% of the papers included overall in the updated review. As in the original review, the overview of this 'traditional' review summarises the key findings as follows: it is clear that prisoners with mental disorders are significantly over-represented in the prison population; as many as 12-15% of all prisoners have 4/5 co-existing mental disorders; 30% of all prisoners have a history of self-harm; and the incidence of mental health disorder is higher for women, older people and those from ethnic minority groups. Although cross-sectional studies are clearly important they are not able to pinpoint causality – an issue that reverberates across this review. Thus, a relatively large proportion of the investment in research into prison mental health continues to be made into epidemiological research. However, the overall findings from the more recent research in this field reflect those

outlined in the original review. The wisdom of pursing such research again in the future seems highly questionable.

3. Review of Interventions for Prisoners with Mental Disorders

We noted in the original review that even when high quality evidence can be found for effective mental health interventions with the general population - mentally disordered offenders (MDOs) might differ in important ways. As we have seen a major issue for MDOs is co-morbidity and in most general population-based RCTs this might well lead to exclusion from a trial. It is also important to be clear whether for MDOs the aim of an intervention is to alleviate the mental disorder or reduce criminality or both (although little is understood about the relationship between the two). Hence in this review only those interventions that have been designed to improve health status have been included. The full method for this review is detailed in section 3.2 with included reviews being assessed using the DARE criteria whereas included individual papers were assessed using a hierarchy of evidence (Sutton at al, 1998). The results, which are presented by diagnostic category, are disappointing and no study approaches anywhere near the gold standard for an RCT. Some reasons are postulated for the lack of controlled studies in prison settings. First that it might be problematic to obtain informed consent. Second, that prison environments might not lend themselves to the organisation of controlled trials, indeed, participants at the consultation day argued that prison context was a significant confounding variable. This is especially true in 2007 where frequent prisoner transfers do not allow the meaningful collection of 'before' and 'after' data let alone longer-term follow-up.

4. Review of Service Delivery and Organisation for Prisoners with Mental Disorders

Further reasons for the lack of evidence for effective interventions for individual prisoners with mental health disorders are revealed by the review of service development and organisation (SDO). It has become clear that there are large numbers of MDOs in prisons, but interventions can only be employed if mental disorders are detected. Prisons are closed institutions in which repeated reports have emphasised the lack of skills, resources and appropriate culture to provide adequate mental health care. It is not surprising therefore that recent policy has stressed 'systems-wide' change over the development of interventions for individuals. The method for this aspect of the review is outlined in section 4.2.

All included papers were selected independently by two reviewers and selected papers had to take the form of research, inquiry, investigation or study. Commentaries or simple descriptions were excluded (see section 4.7). A total of 31 papers were included and added to the original categories. 'Service User' and 'New Interventions' were also added as new edition categories.

The breadth of the subject area and the variety of research methods employed makes it difficult to draw one overarching conclusion. However, almost all studies give recommendations that support current prison mental health policy and numerous papers provide more detailed guidelines or standards. Only a small amount of research however has addressed the impact of implementing these standards. Theoretical papers have illustrated the contradictory cultures of mental health and the criminal justice system. There is, however, little research into the organisation, culture and service systems within prisons. The identification of MDOs in prisons is a crucial first

step in providing effective mental health care with the secondary benefit of raising the awareness of prison staff through training. More generally, little is known about the impact of training prison staff (in any area) and the effect this has on the mental health outcomes of prisoners. Finally, mental disorders are over-represented in certain minority groups (women, older people and ethnic minority groups) whose needs are not met. More research is needed into 'what works for whom'. It is also encouraging to see that new studies have been commissioned involving service users since the original review was conducted.

5. Discussion

The 2001 review aimed to elicit literature relating to mental disorder and prisons in order to inform future research priorities that will underpin policy development in this area. The review was divided into three main sections; a background paper (policy, epidemiology and a review of effective mental health interventions for the general population), a review of effective interventions for prisoners with mental disorder and a review of research focusing on service delivery and organisation of mental health services for prisoners. This review was then updated in 2006/7 by a team at the University of Lincoln.

As in the 2001 review, the traditional review of epidemiology clearly demonstrated that there is a much higher prevalence for all mental disorders for prisoners when compared with the general population. This was especially true for sub-groups within the prison population such as women. The high levels of co-morbidity in the prison population are also a significant issue. However, point prevalence studies are cross-sectional, and provide us with no understanding about the aetiology of mental disorder in prisoners. The 2001 review asked whether prisoners arrive at reception with a mental disorder already established or whether the disorder develops in the prison environment. This remains a key question, with important implications for policy, warranting further rigorous examination.

The review of effective mental health interventions for the general population illustrated the variation in the quality and quantity of available evidence (in the key diagnostic groups that are most represented in prisons). Whilst it might appear to be clear that certain interventions will have a demonstrable impact on prisoner's mental health status this cannot always be taken for granted. First, prisoner's high levels of co-morbidity will complicate this picture. Second, outcomes achievable in community settings might not be so readily achievable in prisons, for example, improvements in social functioning. The review of effective interventions for prisoners themselves was illuminating. There is a paucity of high quality research in this area with only one randomised controlled trial ever undertaken. It is possible to speculate on the reasons: focus on 'systems-level' policy initiatives; little development of appropriate outcome measures; problems with obtaining informed consent; the highly rapid movement of prisoners around the estate; and a lack of prison ownership of the research agenda. Whatever the reasons, prison effectiveness research (in the context of the MRC Framework for Complex Interventions) is at a very early phase of development. This is true too of the prison mental research agenda in the field of SDO the largest and most complex area of the review. Here, one focus was on the provision of theoretical frameworks that demonstrate the ways in which mental health service provision and the criminal justice system exist in 'parallel universes'.

Finally, it has become clear that user involvement is an important area to address in prison mental health research as it is elsewhere. The original review did not include any papers that so much as describe the 'service user' perspective let alone evaluate it. However, 4 papers were included in the updated review and we are aware that a new group has been funded by the mental

health research network - SUCESS (Service User and Carer Experience in Secure Settings), based in Oxleas Trust. In addition, the Sainsbury Centre for Mental Health has been undertaking an, as yet unpublished, review of user involvement in the criminal justice system funded by the Prison Health Research Network.

SECTION 1 - REVIEW PROTOCOL

Aims and Objectives of the Research

The purpose of the original research was to provide a rigorous, systematic and comprehensive review of the relevant primary and secondary mental health literature in order to inform the new research priorities for prisoners with mental disorders. This document utilises the same methods developed in 2001 to provide an update to that review, focussing on literature published between 2002 and 2006.

1.2 Method

The work described in this updated review involved three different phases. The first stage was undertaken in order to inform the background section of the report; whilst the latter two involved systematically reviewing the literature relating to mental health problems in prisons in order to address the aims and objectives of the commissioned research.

A traditional review of the epidemiology of mental health problems in prisons in order to supplement the background of the report.

A systematic review of literature on interventions used to treat mental disorders in prisons, following the NHS Centre for Reviews and Dissemination (CRD) guidelines (NHS CRD,
2001)

A systematic review of the literature on service delivery and organisational issues relating to mental disorders in prisons, following the methods currently being developed by the NHS SDO Programme (Fulop et al., 2001)

Details of the specific methodologies used are provided in subsequent sections.

1.3 References

Fulop, N., Allen, P., Clarke, A. & Black, N. (2001) Studying the Organisation and Delivery of Health Services. Research Methods. London: Routledge.

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SECTION 2 - BACKGROUND TO THE REVIEW

2.1 Strategic Context

When the original review was conducted, at any one point in time 72,000 people were being held in 135 prisons in England and Wales. By April 2007, this figure had increased to 80,168 individuals being held in over 139 prisons in England and Wales (Ministry of Justice, 2007) with prison overcrowding becoming a major news topic. A high proportion of prisoners come from socially excluded sections of the community so it is perhaps not surprising that epidemiological research has shown that 90% of prisoners have either a mental health or substance abuse problem (Singleton et al, 1998). The figure of 90% rises to 95% if Young Offenders' Institutions are considered separately. As shown in the epidemiology section of this report, more recent research has largely reinforced this finding.

The NHS Executive and HM Prison service made it clear in 'The future organisation of prison health care' (1999) that systems for dealing with the high incidence of mental health problems in prisoners were underdeveloped. Two major deficits were identified: screening arrangements for the need for mental health care at reception; and the inadequate level of care-planning that takes place generally within prisons. The report further stated that to improve this situation the care of mentally ill prisoners should develop in the following manner:

- In general all future improvements should be in line with NHS mental health policy in particular the National Service Framework (NSF) for mental health (Department of Health, 1999).
- Special attention should be paid to the better identification of mental health needs at reception screening
- Mechanisms should be put in place to ensure the satisfactory functioning of the Care Programme Approach (to develop mental health outreach work on prison wings)
- Prisoners should receive the same level of community care within prison that they would receive in the wider community
- Policies should be put in place to ensure adequate and effective communication between NHS mental health services and prisons

A more recent document (Department of Health and Her Majesty's Prison Service, 2001) developed a much more specific policy for modernising mental health services in prisons. The foreword re-affirmed the principle of the National Service Framework underpinning the strategic direction of service development and set out a vision for the next three to five years. It was recognised that this was likely to be a major challenge with 'mental health services in prisons struggling to keep pace with developments by the NHS'. The statement called for a 'move away from the assumption that prisoners with mental health problems are automatically to be located in the prison health care centre'; with greater use of primary care, mental health in-reach services, day care and wing-based treatments that mirror the range of community-based mental health services that would be available outside the prison setting.

Thus when the original review was produced, there was clearly recognition, within policy, of the need to plan more effective mental health services for prisoners that are locally commissioned, based on health needs as-

sessment exercises previously undertaken and that acknowledge the type of prison, i.e. for women, young offenders, remand prisoners or open prisons. Resources for the plan were to be derived both from new investment (with 300 new staff for prison in-reach services being funded by the DofH) and from existing investment in prison health care - when the original review was produced, this was estimated to be 50% of the total budget of £90 million.

Core components of services that were proposed for prisoners are listed below:

Primary Care Services	To include screening at reception, diagnosis and recognition of complex disorders. The provision of talking therapies perhaps links to NSF planned graduate mental health workers.
Wing-based Services	Care co-ordination continues where applicable. CPNs as part of local CMHTs to provide some services. Involvement too with Probation services.
Day Care Services	Aim to provide a non-threatening therapeutic environment with access to more specialised services. HMP Brixton's Day Care Service quoted as an example of good practice.
In-patient Services	Full range of services reduces pressure on beds. However, some will still require 24-hour intensive support. Move to crisis resolution model flagged up in the NSF.
Transfer to NHS Facilities	Transfer might be necessary to NHS secure care when needs are severe. Need for co-ordination between Prison Service and NHS.
Suicide Prevention	A pilot study in five prisons launching a specific strategy for suicide prevention includes new prison in-reach pilots.

In addition, further guidance was expected on groups with special needs such as women and prisoners with either a learning difficulty or a dual diagnosis.

This was therefore the strategic context for the original review. The Prison Health Policy Unit and the Task Force planned to oversee all these modernisation initiatives at a national level. It was anticipated that by 2004 some key deliverables would have been achieved including: 300 more staff providing in-reach services; thus, 5000 more prisoners with a severe and enduring mental health problem receiving more comprehensive care; and every prisoner with a serious mental illness to have a care plan on release. There remained questions, however, about how these changes could best be operationalised, and these were addressed where possible in the review.

Since the original review was conducted, some of the above policy aims have been achieved. For example, new services have been provided – including 90 prison in-reach teams with c.350 staff (Steel et al., 2007), and primary care teams to assess mental health problems. However, there is clear evidence to indicate that in-reach staff more often offer assessment to mentally disordered prisoners rather than interventions (Brooker et al., 2006). Furthermore, some of the policy aims above have been reflected again in an (unsuccessful) private member's bill introduced to the House of Commons by Charles Hendry MP in 2005. This stated that:

"Where it has been established that a criminal has mental health needs, there would be a legal requirement for these needs to be professionally and thoroughly assessed at the start of their sentence…Those with mental health requirements would be detained only in an establishment with specialised facilities, and with staff trained to deal with them. A pathway programme of support would have to be developed to en-

sure that their mental health needs were met"

Thus, despite the introduction of the policies outlined in the original review, this bill reflects growing concern in 2005 about the devastating impact of mental health disorders on the prison population.

The NHS assumed responsibility for prison mental health care in April 2006. However, there is still a need for increased investment of resources in this area as prisoners remain more socially excluded than all other groups in society, with a higher risk of suicide and self-harm, plus a higher prevalence of serious mental illness than the general population.

The following section of this updated review considers research on the epidemiology of mental disorders in prisons. This provides a valuable context through which the adequacy of existing research in terms of the nature and occurrence of mental disorders in prisons can be assessed.

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2.2 An Epidemiological Review of Mental Disorders in Prisons

2.2.1 Introduction

A total of eighteen new papers have been included in this section of the review.

a) Background

Although prisoners represent a very small proportion of the total population, approximately 0.1%, they are likely to be extensive consumers of a wide range of services (Singleton et al, 1998). Prisoners represent a socially excluded group, who experience many health and social inequalities (Shaw, 2002). In 1993, The Review of Health and Social Services for Mentally Disordered Offenders and Others Requiring Similar Services (Anon, 1993) identified research into the prevalence of mental disorders among remand prisoners as a priority. There is considerable research to suggest that the prison population are at greater risk of developing mental health problems compared with people of a similar age and gender in the community (Liebling, 1993). Furthermore, prisoners are less likely to have their mental health needs recognised, are less likely to receive psychiatric help or treatment, and are at an increased risk of suicide (Birmingham et al, 1996). The National Service Framework (NSF) for Mental Health (DoH, 2001) in England made it clear that its recommendations applied to all working age adults, including prisoners (Anon, 2001).

b) Prison and Prisoner Numbers

The 2001 review stated that any one point in time, 72,000 people were held in 135 prisons in England and Wales (Anon, 2001) and that one 'worst case scenario' predicted that the prison population would rise to 83,500 in 2008 (Gray and Elkins, 2002). This 'worst case scenario' now looks set to become reality as in April 2007 80,168 individuals were being held in over 139 prisons in England and Wales (HM Prison Service, 2007). 138 of these individuals were being held in police cells under Operation Safeguard. There has also been a substantial amount of media coverage of the issue of prison overcrowding, and the Home Office now predict that if recent sentencing trends continue the prison population for England and Wales will increase to 98,190 by June 2013 (Home Office Research and Statistics Directorate, 2006).

In February 2007 nearly 95% of prisoners were male, and over three-quarters of these prisoners were sentenced prisoners. A further 16% were male remand prisoners. The remaining 5% were women prisoners (Home Office, Research and Statistics Directorate, 2007). Surveys have shown that as many as 90% of prisoners have a diagnosable mental illness, substance abuse problem or, frequently, both (Anon, 2002). Among young offenders and juveniles that figure is even higher, 95% (Anon, 2001). It is also known that mental illness can contribute to re-offending and problems of social exclusion (Anon, 2001).

c) Classification of Mental Disorders

The Mental Health Act 1983, section 1(2), defines mental disorder as 'mental illness, arrested or incomplete development of mind, psychopathic disorder and any other disorder or disability of mind' (Peay, 1991). There are two major methods of classifying mental disorders: ICD-10 (World Health Organisation, 2007) and DSM-IV (American Psychiatric Association, 1994). This review is primarily concerned with five major mental disorder categories, as classified in ICD-10:

- F10-F19 = Mental and behavioural disorders due to psychoactive substance use. This includes mental and behavioural disorders due to the use of alcohol, opioids, cannabinoids, sedatives or hypnotics, cocaine, other stimulants (e.g. caffeine), hallucinogens, tobacco, volatile solvents, multiple drug use and use of other psychoactive substances.

- F20-29 = Schizophrenia, schizotypal and delusional disorders. This includes schizophrenia, schizotypal disorder, persistent delusional disorders, acute and transient

psychotic disorders, induced delusional disorder, schizo-affective disorders, other non-organic psychotic disorders and unspecified non-organic psychosis.

- F30-F39 = Mood (affective) disorders. This includes manic episode (e.g. hypomania), bipolar affective disorder, depressive episode (mild, moderate or severe single episode), recurrent depressive disorder, persistent mood (affective) disorders (e.g. cyclothymia, dysthymia), other mood (affective disorders) and unspecified mood (affective) disorders.

- F40-F48 = Neurotic, stress-related and somatoform disorders (in particular F40-43). This includes phobic anxiety disorders (e.g. agoraphobia, social phobia and specific isolated phobia), other anxiety disorders (e.g. panic disorder, generalised anxiety disorder, mixed anxiety and depressive disorder), obsessive compulsive disorder, reaction to severe stress, and adjustment disorders (e.g. post traumatic stress disorder), as well as dissociative (conversion disorders), somatoform disorders, and other neurotic disorders.

- F60-69 = Disorders of adult personality and behaviour (in particular F60-F62). This includes specific personality disorders (e.g. paranoid personality disorder, schizoid personality disorder, dissocial personality disorder, etc.), mixed and other personality disorders. This category also encompasses enduring personality changes (not attributable to brain damage and disease), habit and impulse disorders (e.g. pathological gambling), gender identity disorders, disorders of sexual preference, psychological and behavioural disorders associated with sexual development and orientation, other disorders of adult personality and behaviour, unspecified disorder of adult personality and behaviour. However, these latter disorders fall outside the remit of this review.

d) Methods Used to Assess Psychiatric Morbidity

A wide range of methods are used to estimate the prevalence of psychiatric morbidity; for example, clinical interviews, such as the Structured Clinical Interview for DSM-IV (SCID-II) for personality disorders, and Schedules for Clinical Assessment in Neuropsychiatry (SCAN) for psychotic disorders; and lay interviews, such as the Clinical Interview Schedule (CIS-R) for neurotic disorders (c.f. Singleton et al, 1998). Differences between estimates obtained from different studies may, therefore, be a reflection on the use of different methods of measurement.

2.2.2 Methods Used for Epidemiological Review

Unlike the methods used for the main review of mental health interventions in prisons, a traditional review of the epidemiological literature was undertaken. This is because the aim of this review is to give an overview of the prevalence of mental disorders among British prisoners in order to inform the scope and priorities of subsequent sections of this report.

a) Search Strategy

References retrieved from the broader systematic literature searches were, therefore, identified that specifically related to the epidemiology of prisoner mental health. The following major electronic bibliographic databases were searched:

- ASSIA
- Database of Abstracts of Reviews of Effectiveness (DARE)
- Embase
- Medline
- Mental Health Abstracts
- NHS Health Technology Assessment (HTA) database
- PsycINFO
- Science Citation Index
- Social Sciences Citation Index
- Social SciSearch
- Sociofile

The reference lists of relevant articles were also checked for additional references.

b) Selection of Papers

Recent reviews and large-scale population surveys of sentenced and remand prisoners conducted either in Britain or overseas and published in English after 2001 were included in this overview, as were key papers yielding additional useful information. Papers solely relating to prisoners aged less than 18 years were not included in the updated review.

c) Data Extraction and Synthesis

Key data were extracted from the major prevalence studies and tabulated (refer to Table 2.1 and Table 2.2 in the Appendices). Although no formal critical appraisal of the articles has been undertaken, reference to the limitations of the methodologies employed is provided in the textual summary below. As the focus of this review is on mental health services for prisoners in Britain, the British and international literature have been examined separately. Key differences between sentenced and remand, and male and female prisoners are also highlighted.

2.2.3 The Prevalence of Mental Disorders within British Prisons

A number of studies have been published since 2001 examining the epidemiology of mental health problems among prisoners, some of which relate specifically to British prisoners. **Table 2.1** and **Table 2.2** highlight the key features of the major recent epidemiological studies conducted relating to sentenced and remand prisoners respectively, including a number of studies focusing on the UK. Until the mid-1990s, the majority of research in this field had been conducted by Gunn and Maden (e.g. Gunn et al, 1991a, b; Maden et al, 1995; Maden, 1996) and had generally focused on the remand population who were thought to be at particular risk, compared with both the sentenced and general population Maden et al, 1995; Maden, 1996; White, 1997). Badger et al. (1999) identified 12 items from the academic literature, published between 1990 and 1997, that related to mental disorder among sentenced prisoners in Britain (Gunn et al, 1991a, b; Dolan and Coid, 1993; Gunn, 1993; Gunn et al, 1991c; Institute of Psychiatry, 1992; Maden and Gunn, 1993; Maden et al, 1994a, b; Mitchison et al, 1994; Swinton et al, 1994; Swyer and Lat, 1996), and 17 articles reporting studies of remand prisoners in Britain. Four of these (Robertson et al, 1987; Coid, 1988; Taylor and Gunn, 1984; Taylor and Parrott, 1988) were ultimately not included in their review, because the data on which they were based dated from before 1983 (NHS Centre for Systematic Reviews and University of Reading (1999). The remaining 13 studies all attempted to determine the prevalence of mental disorders (either in general or for specific conditions) among samples of British prisoners (Birmingham et al, 1996; Bannerjee et al, 1995; Brooke et al, 1996; Davidson et al, 1995; Dell et al, 1993a, b; Mason et al, 1997; Murphy et al, 1995; Robertson, 1988, 1992; Robertson et al, 1994; Watt et al, 1993; Weaver et al, 1997). The majority of these studies only examined male prisoners.

From an epidemiological viewpoint, Badger et al. (1999) identified a number of limitations to these earlier studies. Although detailed demographic and other information is given about the general population of sentenced prisoners, and of the sample of people assessed during the studies, this information is not given for those found to have a mental disorder. Comparisons of this group with the sample, or with the prison population as whole, or with the general population outside the prison, are not given, and therefore the studies do not reveal the existence or significance of risk factors for being in prison and having a mental disorder. The Gunn et al. (1991a,b) study, for example, was wholly concerned with the prevalence of specific diagnoses of mental disorder in the sentenced prisoner population, and with estimates of the numbers and characteristics of those prisoners judged to have a need for treatment within prison, in a therapeutic community, or in a psychiat-

ric hospital (Badger et al, 1999). Many of these studies were point prevalence studies only providing a cross-sectional view of the spectrum of mental disorder and treatment needs in the prison population. Grubin et al.47, therefore, attempted to address this weakness by undertaking a two-year longitudinal, prospective survey comprising a large cohort of unconvicted male prisoners, monitored throughout their entire time on remand. This early work proved useful in planning England and Wales' most significant survey of psychiatric morbidity among prisoners by the Office for National Statistics (ONS) in 1997.

a) The ONS Survey of Psychiatric Morbidity Among Prisoners in England and Wales (Singleton et al, 1998)

The main aim of this survey was to collect baseline data on the mental health of male and female remand and sentenced prisoners in order to inform general policy decisions. These baseline data were compared with corresponding data from previous ONS (OPCS) surveys of individuals resident in private households, institutions catering for people with mental health problems and homeless people. In addition the survey aimed to examine the varying use of services and the receipt of these in relation to mental disorder and to establish key, current and lifetime factors which may be associated with mental disorders of prisoners. The survey included assessment of personality disorder, neurosis, psychosis, alcohol and drug dependence, deliberate self-harm, and intellectual functioning, and the co-morbidity of these disorders. All prisons in England and Wales were included in the survey. All inmates aged 16 to 64 years were eligible for selection in the sample. Women prisoners and men on remand are a comparatively small proportion of the total prison population; therefore, these groups were oversampled to provide adequate numbers to allow separate analysis of the data for these groups. A total of 1,121 male and 584 female sentenced prisoners and 1,250 male and 187 female remand prisoners were studied.

b) Overall Prevalence of Mental Disorders Among British Prisoners

The ONS survey indicated that nine out of every ten prisoners had at least one of the five disorders considered in the survey (neurosis, psychosis, personality disorder, alcohol abuse or drug dependence), (Anon, 2001). 7% (95% CI: 3-11) of sentenced men, 10% (95% CI: 6-14) of remanded men and 14% (95% CI: 8-20) of women had a psychotic illness within the past year (Singleton et al, 1998; Melzer et al, 2002; Fryer et al, 1998). Other studies have found lower overall levels of prevalence: for example, Grubin et al. (1997) found that 62% of male remand prisoners had a current psychiatric disorder; this is in contrast to 71% lifetime prevalence. There are also marked differences between remand and sentenced prisoners: an estimated 66% of the remand population are thought to have some form of mental health problem, compared with 39% of the sentenced population (Institute of Psychiatry and Health Advisory Committee for the Prison Service, 1998). Although there are considerable mental health problems in the prison population, the majority of mentally disordered prisoners are not suffering from a severe mental disorder that would ordinarily require detention in hospital under the Mental Health Act 1983 for medical treatment (Anon, 2001).

The five British prevalence studies identified in this updated review (Lader et al., 2003; Coid et al., 2003a; Coid et al., 2003b, O'Brien et al., 2003, Brugha et al, 2005) all utilise data from the Singleton et al (1998) survey and therefore do not add any new findings to this section of the review, although they do provide useful data relating to specific groups within the overall ONS sample/specific mental disorders.

Before examining the prevalence of specific mental disorders among prisoners in more detail, it essential to note that the figures quoted vary between studies. This is partly as a result of the range of psychiatric morbidity assessments used (see above [Singleton et al, 1998]), but also due to the manner of

reporting; for example, it is not always clear whether the figures relate to lifetime or current prevalence. For the purpose of this review, emphasis is placed on the prevalence rates reported in the ONS survey (refer to Table 2.4). Across all studies and prisoners (sentenced vs. remand; male vs. female), the four major mental disorders are:

1. Personality disorder (ranging from 50% in both sentenced and remand female prisoners, to 78% in male remand prisoners Singleton et al, 1998)
2. Neurotic disorders (ranging from 40% in male sentenced prisoners to 76% in female remand prisoners, Singleton et al, 1998)
3. Drug dependency (ranging from 34% in male sentenced prisoners to 52% in female remand prisoners, Singleton et al, 1998)
4. Alcohol dependency (ranging from 19% in female sentenced prisoners to 30% in both sentenced and remand male prisoners, Singleton et al, 1998)

In addition, between 7% (male sentenced prisoners) and 27% (female remand) have attempted suicide in the last year; between 6% (male sentenced) and 13% (female sentenced and remand) have a schizophrenic or delusional disorder; between 5% (male remand) and 10% (female sentenced) have self-harmed during their current prison term; and 1-2% of prisoners have affective psychosis (Singleton et al, 1998).

The following section considers each of these major mental disorders, as classified in ICD-10, in more depth.

c) Major Mental Disorders Classified Under ICD-10

Disorders of adult personality and behaviour (ICD F60-69)

The rate of personality disorder reported in prisons varies enormously between 7% (Gunn et al, 1991a,b) and 78% (Singleton et al, 1998). Rates are generally higher among male prisoners. This large variation in prevalence rates is due to the difficulty in measuring personality disorder, and the lack of concordance between different rating instruments (Shaw, 2002; Gunn, 2000). For example, the ONS survey used standardised clinical interviews administered by non-psychiatrists (Gunn, 2000).

Neurotic, stress-related and somatoform disorders (ICD F40-48)

Neurotic disorders encompass a wide range of conditions, including phobias, panic disorder, anxiety disorders, and depressive disorders. Rates range from approximately 5% (Gunn et al, 1991a,b; to 63% (Singleton et al, 1998) and are generally higher among female prisoners.

Mental and behavioural disorders due to psychoactive substance use (ICD F10-19)

Rates of drug dependency have been reported between 10% (Gunn et al, 1991a,b) and 38% (Brooke et al, 1996), and are generally higher among remand prisoners. Large, population-based studies of prevalence of mental disorder in prisons have reported rates of alcohol dependence between 9% (Gunn et al, 1991a,b) and 30%(Singleton et al, 1998). Rates of alcohol dependency tend to be higher among male prisoners. Mason et al. (1997) conducted a study of substance abuse in remand prisoners at Durham prison. 548 prisoners were comprehensively screened for substance abuse (Shaw, 2002). 382 men (70%) gave a history of illicit drug use at some point in their lives. Of these, 312 (57%) reported using illicit drugs during the last year, and 181 (33%) currently met abuse/dependency criteria. The research in this area has used mainly self-report measures, and many researchers have expressed concern about the reliability of these, particularly in custodial settings. It is probable that the true prevalence is much higher, particularly for drugs (Shaw, 2002).

Schizophrenia, schizotypal and delusional disorders (ICD F20-29)

Rates of schizophrenic or delusional disor-

der range from approximately 1% (Gunn et al, 1991a,b) to 13% (Singleton et al, 1998), and are generally higher in women and remand prisoners.

Mood (affective) disorders (ICD F30-39)

Prisoners suffer a number of psychotic and affective (mood) disorders, including manic episodes, bipolar disorder, and depressive episodes and disorders. Reported rates range from 2%(Singleton et al, 1998) to 4% (Gunn et al, 1991a,b), and are slightly higher among female prisoners.

Attempted suicide and self-harm

In addition, a number of documents report the rates of attempted suicide and self-harm (Towl et al, 1999). Concerns over the steady increase in the number of self-inflicted deaths in prisons in the 1980s led to the setting up of the first full thematic review by the Her Majesty's Chief Inspector of Prisons (commonly referred to as the Tumin report) which reported in 1990 (McHugh and Snow, 2002). The 1999 review showed that the average annual rate of suicide in English prisons was rising, and in 1998 was 128 per 100,000 population (Shaw, 2002). In 2001, there were 72 self-inflicted deaths in prisons in England and Wales (National Electronic Library for Health, 2002); the majority of which were suicides by women (The Samaritans, 1998). This was a 44% increase since 1990 and a 167% increase since 1983. It has been estimated that a prisoner is seven times more likely to kill themselves compared with someone living in the community (Mental Health Foundation, 1999). Liebling (1995) conducted a number of epidemiological studies on the nature and frequency of self-harm in prisons. She found that self-harm was common in young men, on remand, and one third occurred within three weeks of imprisonment (Shaw, 2002). These findings are echoed in a critique of UK research on suicide in prisons (Crichton, 2002). A HM Prison Service internal review recommended the three year implementation of a new suicide prevention strategy in 2001 (Meltzer et al, 1995). However, more recent research suggests that the rate of suicide attempts amongst young offenders is still high. Using self-report, Lader et al., (2003) found that 20% of young male offenders on remand stated that they had attempted suicide at some point in their life. This figure was 33% for female respondents. 17% of male attempts had taken place in the year before interview, and 3% in the previous week (Lader et al, 2003:145).

Co-morbidity of mental disorders

The ONS survey indicated that no more than two out of ten in any sample group have only one disorder and 12-15% of sentenced British prisoners have four or five of the five major mental health problems (Anon, 2001). Rates for multiple disorders are higher among remand than sentenced prisoners (Singleton et al, 1998). Much of this co-morbidity is due to substance misuse and morbidity secondary to this, such as depression, anxiety and withdrawal phenomena (Maden et al, 1995).

2.2.4 The Prevalence of Mental Disorders in the General Population

In order to make sense of these figures, it is helpful to compare the rates to those in the general population. However, not only are there huge variations in the figures reported amongst prisoners, but also in those reported in the general population. It is also difficult to compare these figures directly as the methods used vary considerably. In addition, the authors have been unable to find a single study that has covered all of the mental disorders examined in the ONS survey of prisoners.

Perhaps the most appropriate study to compare with is the OPCS surveys of psychiatric morbidity (Meltzer et al, 1995) upon which the ONS survey was based (Singleton et al, 1998). The OPCS surveys aimed to provide information about the prevalence of psychiatric problems among adults in England, Scotland and Wales, as well as their associated social disabilities and use of services. Four separate surveys were carried out from April 1993 to August 1994, including one covering 10,000 adults aged 16 to 64

years living in private households. The main focus of the survey was neurotic psychopathology as measured by the Clinical Interview Schedule – Revised (CIS-R). Attempts were also made to estimate the prevalence of psychosis (assessed via a clinical interview, SCAN), drug dependence and alcohol dependence (assessed by self-completion questionnaires).

Overall, approximately one in seven adults (160 per 1,000) had some sort of neurotic health problem (as measured by a score of 12 or more on the CIS-R) in the week prior to interview (Meltzer et al, 1995). This is in contrast to between 40% (male sentenced) and 76% (female remand) in prisoners. Prevalence was generally higher among women. However, the most common symptoms were fatigue, sleep problems, irritability and worry; none of which were covered by the ONS survey of prisoners. The most prevalent neurotic disorder within the week prior to interview was mixed anxiety and depressive disorder (7.7%), followed by generalized anxiety disorder (3.1%), depressive episode (2.1%), obsessive-compulsive disorder (1.2%), phobia (1.1%), and panic disorder (0.8%). Three other psychiatric disorders were covered in the survey. Functional psychosis was found to have a prevalence of 0.4% in the past year. The overall rate of alcohol dependence was 4.7% in the last year (compared to 19-30% in prisoners [Singleton et al, 1998]), and the rate of drug dependence was 2.2% in the past year (compared to 34-52% in prisoners [Singleton et al, 1998]). Very little information is provided about the co-occurrence of mental disorders.

2.2.5 The Prevalence of Mental Disorders in Prisons Internationally

A number of studies have been conducted on the prevalence of mental disorders among prisoners internationally. Perhaps the most comprehensive are a systematic review of 62 surveys from 12 western countries (Australia, Canada, Denmark, Finland, Ireland, the Netherlands, New Zealand, Norway, Spain, Sweden, UK and USA) published in The Lancet by Fazel and Danesh in 2002 and a Systematic Review of the International Literature on the Epidemiology of Mentally Disordered Offenders undertaken in 1999 by Badger et al. on behalf of the NHS Centre for Reviews and Dissemination (CRD) and the High Security Psychiatric Services Commissioning Board (NHS Centre for Reviews and Dissemination and University of Reading, 1994). These reviews generally echo the findings found in British prisons.

The former review included data from approximately 23,000 prisoners, and suggested that 3.7% of men (95% CI: 3.3-4.2) had psychotic illness, 10% (9-11) major depression, and 65% (61-68) a personality disorder, including 47% with antisocial personality disorder (Fazel and Danesh, 2002), 4.0% women (3.2-5.1) had psychotic illnesses, 13% (11-14) major depression, and 42% (38-45) a personality disorder, including 21% (19-23) with antisocial personality disorder (Fazel and Danesh, 2002). Although there was a substantial heterogeneity among studies (especially for antisocial personality disorder), only a small proportion was explained by differences in prevalence rates between detainees (equivalent to remand prisoners in Britain) and sentenced inmates. Prisoners were several times more likely to have psychosis and major depression, and about 10 times more likely to have anti-social personality disorder, than the general population (Fazel and Danesh, 2002). These findings are reinforced in a more recent international study by Nielssen and Misrachi. They found the prevalence of psychotic illness among male prisoners in New South Wales to be "approximately 14 times greater than the recent estimate of the prevalence of psychotic illness in the Australian community derived by clinician assessment" (2005:457).

A recent study of 80 randomly selected remand and sentenced prisoners in one Greek prison found higher prevalence rates of major depression than the Fazel and Danesh review. Here 27.5% of prisoners were found to have major depression. However, this study was only based on a small number of

prisoners from one prison (Fotiadou et al, 2006). Similarly, Tye and Mullen's (2006) study of female prisoners in Victoria found that 44% of female prisoners were diagnosed with major depression.

Additionally Fazel and Grann (2004) found that 20% of homicide offenders in Sweden had a psychotic illness. This is a much higher percentage that that reported in the Fazel and Danesh (2002) review.

The Badger et al. review covered mentally disordered offenders (MDOs) in the criminal justice system, as well as in the general population, in special hospitals, and in the general psychiatric services system, i.e. had a broader remit than this review. 858 UK and international studies were identified and 393 were related to the criminal justice system. 104 of these were about mentally disordered sentenced prisoners, 80 were about committers of specific offences, while 34 considered the police management of mentally disordered people, a proportion of whom will not have committed any offence. More recent studies have been conducted in Europe (Anderson et al, 2000; Gosden et al, 2000; Joukamaa, 1995), the United States and Canada (Fisher et al, 2000; Corrado et al, 2000; Lamb and Weinberger, 1998; Swartz and Lurigio, 1999; Powell et al, 1997; Anderson et al, 1996; Jordan et al, 1996; Bland et al, 1990), Africa (Agbahowe et al, 1998), Asia (Ghubash and Eirufaie, 1997; Fido and al Jabally, 1993), and Australia (Herrman et al, 1991) and New Zealand (Brinded et al, 1999a,b).

2.2.6 Prevalence of Mental Disorders Among Minority Groups in Prisons

According to the Changing the Outlook strategy (Department of Health/HM Prison Service, 2001), neither the Prison Service nor the NHS have been effective at recognising the particular mental health needs of specific groups of prisoners, in particular, women, people from minority ethnic groups (Hyslop, 2001; Bhui et al, 1998) and young people. In the 2001 review, this was supported by the general lack of research in this area. Very little new research has been conducted addressing this area over the last five years.

Fazel and colleagues (2001) highlighted the hidden psychiatric morbidity among elderly prisoners. In particular, they found, in a stratified sample of 203 male sentenced prisoners aged over 59 years from 15 prisons in England and Wales, that the prevalence of depressive illness was five times greater than that found in other studies of younger adult prisoners and elderly people in the community.

Several studies have reported the prevalence of mental disorders among male juvenile offenders separately (Gunn et al, 1991a,b; Maden, 1996; Lader et al, 2003). These studies suggest that the rate of personality disorder is higher than among adult prisoners. Further research is now required to address how these specific mental health needs may be met.

Coid et al (2003a; 2003b) examined the relationship between psychiatric morbidity and being placed in disciplinary segregation or in special 'strip' cells as part of the Singleton et al (1998) study. They suggest that men placed in special cells are more likely to have a neurotic disorder (as measured by the CIS-R), and a phobic/depressive disorder (as measured using SCAN). Additionally, prisoners placed in these calls are more likely to self-report suicide attempts and practicing deliberate self-injury (Coid et al., 2003b).

A number of recent studies have focussed on the prevalence of mental health disorders amongst women in prison. For example Anderson studied Danish prisoners on remand and found that they had significantly higher rates of neurotic and dependence disorders (2004: 23). The risk of being diagnosed with these disorders was also increased with higher age. Similarly, Huang et al (2006) studied rates of PTSD among female prisoners in China and found that

the rate was higher in those aged less than 25 years old – where the rate was 15.4% than in the older age group – where the rate was 8.8%. Overall, the rates of PTSD appear to be lower in Chinese prisoners than in other Western countries. Finally O'Brien et al (2003) examined data for the female respondents in the Singleton et al (1998) study. They found that the prevalence of both personality disorder and hazardous drinking decreased with age.

2.2.7 Organisational Issues Effecting Estimation of Prevalence

This epidemiological review also highlighted the importance of a number of related issues, effecting estimation of prevalence of mental disorders in prisons: the acquisition of mental disorders (for example, how many prisoners enter a prison with an existing problem, how many see their problem become exacerbated in prison, and how many acquire a mental health problem actually during their prison sentence); screening for mental disorders in prisons (Shaw, 2002; Grubin et al, 1997; Hyslop, 2001; Fazel et al, 2001; Grubin et al, 2000; Birmingham et al, 2000; Morrison and Gilchrist, 2001); and, transfers to special hospitals (NACRO, 1995; Draine and Solomom, 1999). Many studies highlight issues surrounding whether particular screening tools are appropriate for use with prison populations, have been adapted for use in particular countries or require experienced clinicians to administer them (Nielssen and Misrachi (2005); Anderson 2004; Assadi et al., 2006). Many of these service/organisation related issues are discussed in Section 5, the Review of Service Delivery and Organisation for Prisoners with Mental Disorders.

2.2.8 Implications for Prison Mental Health Services

The findings reported above suggest that the burden of treatable serious mental disorder in prisoners is substantial (Fazel et al, 2001). For example, application of these typical prevalence rates to the prison population of the US suggests that several hundred thousand prisoners might have psychotic illnesses, major depression, or both; an amount that is twice the number of patients in all American psychiatric hospitals combined (Torrey, 1995). This point is echoed by Nielssen and Misrachi (2005) who state that at the time of their study there were very few secure hospital beds available in New South Wales and appropriate facilities needed to be developed to care for large numbers of psychotic individuals upon release from prison. In an average British male prison population, e.g. Brixton, consisting of 800 prisoners (Home Office, 2002) up to 720 prisoners will have a mental health disorder, 512 prisoners will have a personality disorder, 320 will have a neurotic disorder, 272 will be dependent on drugs, 240 will be dependent on alcohol, 56 will have attempted suicide in the last year, a further 56 will have self-harmed, and 48 prisoners will be schizophrenic [figures based on the ONS survey of prisoners, Singleton et al, 1998]. Given the limited, and varied (NACRO, 1995; Maden et al, 1994) resources of most prisons, however, it seems doubtful whether most prisoners with these illnesses receive appropriate care, such as mandated by the European Convention on Human Rights (Anon, 1989).

2.2.9 Overview

The main purpose of including an epidemiological review in the background to this report was to provide a focus for the overall study and help to interpret the findings. Despite the various methods employed in prevalence studies worldwide, findings are consistent: it is clear that prisoners with mental disorders are significantly over-represented in the prison population. The most common mental disorders among prisoners are personality disorders, neurotic disorders and drug and alcohol dependency, raising particular questions about ways of managing and treating these difficulties.

Other important findings of the epidemiological review include:

a) 12-15% of all sentenced prisoners have

4 or 5 disorders (and these rates are even higher in remand prisoners)

b) Around 30% of all prisoners have history of one or more episodes of deliberate self-harm
c) The incidence of mental disorders is higher in minority groups such as women, older people and those from ethnic minority groups.
d) Much of the research reported relies on point-prevalence studies to determine the numbers involved. It is therefore unclear whether prison life per se leads to a mental health disorder, or that the prisoner has a mental health disorder that goes undetected at reception or on appearance in court.

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SECTION 3 - REVIEW OF INTERVENTIONS FOR PRISONERS WITH MENTAL DISORDERS

3.1 Introduction

There are major considerations to be taken into account when applying evidence of what interventions work in the general psychiatric population to prisoners with mental disorders. This review of interventions for prisoners is not therefore directly comparable with the overview of evidence for interventions for non-offender psychiatric patients which was reported in the first review (Brooker et al, 2003).

Mentally disordered offenders (MDOs) may differ in important ways from the patients in the community with the same diagnosis and on whom the evidence is based. A major feature of the MDO population, both in prisons and forensic health care settings, is the prevalence of co-morbidity. For this population, problems tend not to come singularly and the pattern of a major mental illness or personality disorder and a substance misuse problem is not uncommon. The Office of National Statistics (ONS) survey of 1997 found that no more than 20% of their sample had a single mental disorder and that between 12-15% of sentenced prisoners had four or five major mental disorders. Rates of co-morbidity were even higher in remand prisoners. Substance abuse accounted for a significant amount of the co-morbidity along with withdrawal symptoms, anxiety and depression.

Systematic reviews may often be based exclusively or predominantly on randomised control trials (RCTs), generally viewed as the "gold standard". Most RCTs are explanatory trials, that is, they are designed to answer the question "does the treatment work?" under tightly controlled conditions. Participants in the trial tend to be "pure cases", without co-morbidity, and the trials themselves frequently take place at centers of excellence rather than the location where the majority of the interventions are likely to take place. In addition, and depending on the intervention under investigation, it is an atypical patient who agrees to be allocated to a treatment at random. These factors must be taken into account when generalize-ing from an individual RCT or meta-analysis of RCTs to patients in the community or prisoners with the disorder.

The prison environment is self-evidently different from the community environment and this, too, may impact on the efficacy of treatment. With very few exceptions, prisoners don't want to be incarcerated and although they can be grateful that treatment is being offered the real problem can be finding a quiet room where an intervention might be conducted. Indeed, the most recent national survey of prison mental health in-reach teams suggests that prisoners are very rarely offered psychological interventions at all (Brooker and Gojkovic, 2007).

Is the intervention to alleviate the disorder, to reduce criminality or both? As an example, treatments for substance misuse may address both intentions if the prisoners offending pattern is related to substance misuse. For the purposes of this review we do not included papers and reviews specifically focused on the treatment of criminal behavior but have included research where reduction in criminality may be a secondary benefit to treatment of the mental disorder itself.

We should also bear in mind that the prison environment might enhance the effectiveness of interventions. Prisoners are more closely monitored than patients in the community and long-standing disorders may

only be identified after the prisoner has entered the criminal justice process. In these circumstances the prison has an important role in offering treatments that may arrest or reverse further deterioration. The salutary experience of being in prison may also encourage a minority of prisoners to reflect on their mental state and behaviour and accept therapy that they might otherwise reject in the community.

For these reasons it is vital that research is carried out on the effectiveness of treatment for mental disorders in prisons and that the evidence for effective interventions in the general population is considered in the prison context.

3.2 Method

3.2.1 Inclusion Criteria

Reviews, overviews and single studies had to meet all the following criteria to be included in this review.

1. The paper must describe substantive results and not be an evidentially unsupported discussion or opinion paper.
2. Study participants must have been serving prisoners in either adult or juvenile prison facilities.
3. Study participants had to meet ICD-10 diagnostic criteria (or DSM-IV equivalent) for at least one of the following:
    - Mental and behavioural disorders due to psychoactive substance abuse (F10-F19).
    - Schizophrenia, schizotypal and delusional disorders (F20-F29).
    - Affective disorders (F30-F39).
    - Neurotic, stress-related and somatoform disorders (F40-F48).
    - Disorders of adult personality and behaviour (F60-F69) but excluding disorders of sexual preference and sexual development and orientation (F65-F66).
4. The treatments described must be for mental disorder(s) and not for offending behaviours.

3.2.2 Search Strategy

The search aimed to identify all relevant literature relating to interventions for mental disorders in prisons.

3.2.3 Sources

A wide variety of sources were consulted covering medical, nursing, psychological and social science literature, as well as 'grey' literature. The following 22 electronic bibliographic databases were searched:

1. Arts and Humanities Citation Index
2. ASSIA
3. BIOSIS
4. Caredata
5. C2-SPECTR, a trials register of the Campbell Collaboration, covering sociology, psychology, education and criminology
6. Cinahl
7. Cochrane Controlled Trials Register (CCTR)
8. Cochrane Database of Systematic Reviews (CDSR)
9. Database of Abstracts of Reviews of Effectiveness (DARE)
10. Embase
11. Health Management Information Consortium (HMIC)
12. Index to Scientific and Technical Proceedings
13. Medline
14. Mental Health Abstracts
15. NHS Economic Evaluations Database (EED)
16. NHS Health Technology Assessment (HTA) Database
17. PsycINFO
18. Science Citation Index
19. SIGLE
20. Social Sciences Citation Index
21. Social SciSearch
22. Sociofile

3.2.4 Search Terms

A combined free-text and thesaurus approach was used. 'Population' search terms (e.g. prison(s), prisoner(s), remand, offender(s), jail(s), criminal(s), detention, etc.) were combined with 'mental health' terms (e.g. mental health, mental illness, mental disorder, forensic, psychiatric, etc.)

3.2.5 Search Restrictions

No study or publication type restrictions were applied at the search stage. However, searches were restricted to 2002 onwards. Searches were also restricted to English language papers, as the focus of the review was on mental health services in prisons in the UK. As previously, publications were restricted to those published since August, 2002.

A sample Medline (OVID) search strategy is given at **Appendix B.**

3.2.6 Assessment of Quality: Reviews

Reviews were assessed using the Database of Abstracts and Reviews of Effectiveness (DARE) criteria for inclusion of reviews. Briefly, these criteria require that the review's inclusion/exclusion criteria are related to the primary studies that address the review question and that there is evidence of a substantial effort to search for all relevant research e.g. stated computer search strategy. In addition, the review must meet two out of three of the following: the validity of the included studies are adequately assessed; sufficient details of the included studies should be presented; the primary studies are summarized appropriately.

3.2.7 Assessment of Quality: Individual Studies

While it is possible to use criteria such as DARE to assess the quality of reviews, assessing the quality of a heterogeneous range of studies is more problematic. Criteria are available for separate research designs but there are few criteria that are available to measure the quality of a study over a range of designs. Reviews of research in the general population may well limit the scope to one design, to the "gold standard", the RCT. It then becomes possible to equitably quality score all studies with a single set of criteria. However, for reasons already discussed and because the RCT requires informed consent and compliance by participants this design may be particularly problematic in a prison setting we have chosen not to limit the evidence to any one design. We have also chosen not to use the different quality criteria for different designs as there is no absolute 'yardstick' by which all research can be measured. We have chosen instead to categorise the design by the hierarchy in the table below (Sutton et al (1998) based on Deeks et al (1996)) and describe briefly the limitations and problems of each study within the Table of studies.

Hierarchy of evidence

I Well-designed randomised controlled trials
Other types of trial:
II-Ia Well-designed controlled trials with pseudo-randomisation.
II-Ib Well-designed controlled trials with no randomisation.

Cohort studies:
II-2a Well-designed cohort (prospective studies) with concurrent controls.
II-2b Well-designed cohort (prospective studies) with historical controls.
II-2c Well-designed cohort (retrospective studies) with concurrent controls.
II-3 Well-designed case-control (retrospective) study.
III Large differences from comparisons between times and/or places with and without intervention (in some cases these may be equivalent to level II or I)
IV Opinions of respected authorities based on clinical experiences; descriptive studies and reports of expert committees.

3.2.8 Analysis of Studies

If the data allows, subgroup analysis by gender and ethnicity will be carried out. Where six or more studies have unity of participants, interventions and outcomes meta-analyses and funnel plots (to investigate publication bias) will be carried out.

3.3 Summary of Results by Diagnostic Category

The paucity of included studies meant that it was not possible to carry out any subgroup analyses, meta-analyses or funnel plots.

3.3.1 Mental and Behavioural Disorders Due to Psychoactive Substance Abuse

Knight et al (1997) reported a significantly lower rate of substance misuse, post sentence in prisoners who had participated in a therapeutic community programme compared to a control group who had not. Though, strictly speaking, outside the remit of this review the study also contained a sub group of the treatment cohort who had also participated in a post release programme. Participants who had undergone only the prison programme were no different from the control group in recidivism. However, participants who had undergone both programmes showed significantly less recidivism. The authors state that in all key demographics except one the controls and treatment participants were the same. The exception was that the treatment group had higher rates of previous drug offences, which enhances the results.

The study reported by Baldwin (1990) was an RCT of an Alcohol Education Course for young offenders with a self-reported alcohol problem and a history of alcohol related offending. Promising results are reported of better outcomes, post release, in both drinking habits and attitudes and offending in the treatment group compared to the controls. However, the study is underpowered and the quality of reporting of methodology is poor.

Prendegast (2002) was interested in the impact of prisoner perceived coercion to take part in a therapeutic community treatment for drugs and/or alcohol abuse. In what appears to be an adequately powered study there was no significant difference in change in psychological function between participants who perceived themselves as taking part voluntarily and those who perceived themselves as being involuntary participants. Ziotnick et al (2003) report a pilot study that examined the impact of cognitive behavioural therapy (CBT) for female prisoners with co-morbid substance misuse and PTSD. The women (n=18) were offered inducements to participate and there was no control group.

3.3.2 Schizophrenia, Schizotypal and Delusional Disorder

Condelli et al (1994) and Condelli et al (1997) report a large scale study of the impact of the New York State Intermediate Care Programme on a sample of prisoners with mental disorders, of which the largest single diagnostic group was schizophrenia (57%). The study found a post treatment decrease in serious behaviour, suicide attempts, reduction in disciplinary action, reduction in crisis care intervention, seclusion and hospitalisation. There were no significant differences, before and after, for serious infractions, loss of privileges, "keep lock" and emergency medications. The major problem with this study was the absence of any control group that means that it is not possible to attribute the positive findings to the treatment alone. The participant's behaviour and symptoms might have improved, over time, without interventions or with standard care available in the prison setting.

Conroy (1990) studied the outcome for a cohort of prisoners with serious mental illness being treated by a short-term acute care model service. The study showed improvements or stabilization of mental health, social skills and reduction in lock up status. However, the description of the interventions and reporting of statistics are lacking in details and, once again, this is a study without controls.

Foley et al (1995) carried out a small, uncontrolled study of prisoners being treated with Clozapine. Five of the participants were diagnosed with schizophrenia and one diagnosed with schizoaffective disorder. Four of the prisoners also had diagnoses of Axis II disorders. The outcome measure was infraction record and all six participants showed an improvement with treatment. However, the small scale of the study and the lack of control group compromise this result.

Lovell et al (2001) studied the results of 448 prisoners with a range of severe mental disorders, including schizophrenia, that had undergone the McNeil Programme which includes counselling, medication, case management and psycho-educational classes based on cognitive behavioural principles. Significant reductions in symptoms were found as well as improvement in work or school assignments. However, again, these results are compromised by the lack of a control group.

Melville & Brown (1987) carried out an uncontrolled before and after study of an education programme on schizophrenia. The participants were 31 prisoners with a diagnosis of schizophrenia and who were taking anti-psychotic medication. The programme addressed definitions of schizophrenia, description of the disorder, what is known or speculated about the origins of schizophrenia and treatment. Post-test results showed a significant improvement in the patient's knowledge of their own diagnosis, symptoms, causes of schizophrenia, treatments and medications and attitudes to treatment.

3.3.3 Affective Disorders

We found no specific research on interventions for prisoners with affective disorders but Condelli et al (1994); Condelli et al (1997); Conroy (1990); and Lovell et al (2001) research all contained, or were likely to have contained, a minority of participants with affective disorders.

3.3.4 Neurotic, Stress-Related and Somatoform Disorders

In 2004 no research was identified in this category. Salerno (2005) investigated the effects of hypnosis on treatment of PTSD. However, due to a number of methodological weaknesses, such as a small participant group, lack of control group and no organised quantitative or qualitative analysis of the outcomes, positive results should be interpreted with a great deal of caution. A more methodologically sound study is needed to draw any conclusions on the success of hypnosis in treating PTSD.

3.3.5 Disorders of Adult Personality and Behaviour

Lees et al (1999) systematic review lends cautious support to the view that therapeutic communities do lead to change in persons with personality disorders. However, they also argue for more research in the area.

Rice et al (1992) study point to the divergent impact of therapeutic community approach. Prisoners with low or normal Hare psychopathy scores do appear to benefit from such regimes but the author's raise the alarming possibility that therapeutic communities may increase recidivism in Hare "psychopaths".

3.3.6 Other Categories

Bird et al (1999) & Caraher et al (2000) describe an evaluation of a postcard and leaflet campaign promoting mental health in incarcerated young offenders. The researchers used qualitative methods to measure awareness of the purpose of the campaign, evaluation of the impact of the material and the style of the material by prison staff and inmates. Participants showed a lack of clarity about the purpose of the campaign and there were a number of criticisms of the material used.

3.4 Discussion

In 2003 we commented that 'the paucity of research on interventions for prisoners with mental disorders is disappointing. What evidence exists is frequently of a poor quality and poorly reported. Only one study was an RCT and only two additional studies presented results from a concurrent control group'.

In this update of the review we have elicited three new 'trials'. None of which compared the efficacy of an intervention with a control condition – so according to our strict criteria should maybe not have been included at all. In four years and with the disappearance of the National Forensic R&D Group during that interval little has changed.

The absence of RCTs might, in part, be attributed to the difficulty of carrying out randomised controlled studies in a prison setting. RCTs require full consent and co-operation from participants in a way that retrospective prison record studies of matched groups may not. Consent and co-operation may prove particularly problematic with participants who are detained against their will or a population who may feel under duress to participate in experimental or pilot programmes.

However, this does not explain the number of studies where there was no attempt to identify a non-randomised control cohort, particular in those studies were the information was based largely or wholly on standard prison records. Elsewhere (Ferriter and Huband (2002)), it has been argued that non-random controlled studies may prove an acceptable surrogate for randomised controlled trials and that the problems associated with randomisation should be weighed against the advantage when choosing the design of the study. However, if RCTs are impossible in a particular setting, this should not be used as an excuse to carry out uncontrolled studies. Without adequate controls, be they randomised or matched, it is impossible to say whether any treatment effect is as a result of change or maturation over time or the treatment, and non-controlled intervention studies are of little or no scientific value.

As stated above, it cannot be assumed that the characteristics of the mentally disordered prison population are the same as the community psychiatric population. The evidence of effectiveness of interventions in the community may be a starting point but it is not axiomatic that the effects of interventions in the mentally disordered prisoner population will be the same. There is a clear clinical and ethical need to carry out more intervention outcome research with this special population.

3.5 Overview

It is a salutary finding that there is little high quality research that has addressed the effectiveness of interventions for prisoners with mental disorders. Randomised controlled trials, the gold standard for such research, are not easy to conduct in prisons where consent might be difficult to obtain. Co-morbidity might play a part in compromising results from this type of study. There would appear to be two main tasks to address. First, to identify the results of effectiveness research in the general population that might be relevant for prisoners Second, to consider different research methods (such as case control designs) in priority areas of need for prisoners with mental disorders.

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SECTION 4 - REVIEW OF SERVICE DELIVERY AND ORGANISATION FOR PRISONERS WITH MENTAL DISORDERS

4.1. Introduction

As has become apparent, the literature search into the mental health of prisoners revealed three distinct areas of research. The first is concerned with epidemiology and prevalence of mental health disorder; the second, therapeutic interventions and strategies for individual prisoners (Section 3). The third covers the broad area of service delivery and organisation. Whilst the latter is important for promoting, maintaining and restoring the mental health of prisoners, research in this area is far exceeded by published work in the area of service configuration.

A number of reasons might account for this. First, perhaps the greatest factor pushing reform of mental health care in prisons is the rapidly increasing numbers of prisoners with mental health problems throughout all parts of the criminal justice system (Singleton et al, 1998). Second, interventions can only be used if mental illness is identified so there must be a system of assessment and identification of mental illness as early as possible so that appropriate treatment can be instigated (Grubin et al, 1989). Third, the ill-effects of any closed institution have been recognised at least since the 1960s (e.g. Goffman, 1960). Within prisons, the discipline and loss of freedom exacerbate these effects; there is clearly a need to reduce the hazards of the prison environment and optimise the mental health of all prisoners (Smith, 1984). And finally, repeated reports have emphasised the lack of skills, resources and appropriate culture within prisons to provide adequate mental health care (e.g. Reed Committee, 1991).

Given this - far from complete - list of challenges, it is not surprising that recent prison health policy has prioritised changes and improvements at a system-wide level over the development of interventions for selected individuals (Anon, 2001). This has, at least in part, led to a proliferation of papers reporting recommendations, guidelines and standards for the identification and management of mentally ill prisoners as a group (see list of excluded papers, 4.7.6 & 7). Others have gone one step further and reported on the implementation of policy in local services (see 4.7.3).

This section of the review is concerned with the identifying, reviewing and summarising research into aspects of service delivery and organisation in order to make recommendations for the focus and method/methodology of future research in this domain.

4.2 Method

4.2.1 Search Strategy

The search aimed to identify all relevant literature relating to mental health services in prisons.

4.2.2 Sources

A wide variety of sources were consulted covering medical, nursing, psychological and social science literature, as well as 'grey' literature. The following 22 electronic bibliographic databases were searched:

1. Arts and Humanities Citation Index
2. ASSIA
3. BIOSIS
4. Caredata
5. C2-SPECTR, a trials register of the Campbell Collaboration, covering sociology, psychology, education and criminology

6. Cinahl
7. Cochrane Controlled Trials Register (CCTR)
8. Cochrane Database of Systematic Reviews (CDSR)
9. Database of Abstracts of Reviews of Effectiveness (DARE)
10. Embase
11. Health Management Information Consortium (HMIC)
12. Index to Scientific and Technical Proceedings
13. Medline
14. Mental Health Abstracts
15. NHS Economic Evaluations Database (EED)
16. NHS Health Technology Assessment (HTA) Database
17. PsycINFO
18. Science Citation Index
19. SIGLE
20. Social Sciences Citation Index
21. Social SciSearch
22. Sociofile

Finally, the reference lists of relevant papers were checked for additional references, and key researchers and organisations were contacted directly.

4.2.3 Search Terms

A combined free-text and thesaurus approach was used. 'Population' search terms (e.g. prison(s), prisoner(s), remand, offender(s), jail(s), criminal(s), detention, etc.) were combined with 'mental health' terms (e.g. mental health services, mental health, mental illness, mental disorder, forensic, psychiatric, etc.) A sample Medline (Ovid) search strategy is provided in Appendix B.

4.2.4 Search Restrictions

No study or publication type restrictions were applied at the search stage. However, searches were restricted in the first review (Brooker et al, 2003) to 1983 onwards to take in to account relevant legislation, such as the Mental Health Act 1983. In this update we only included papers from 2002-2006. Searches were also restricted to English language papers, as the focus of the review was on mental health services in prisons in the UK.

4.2.5 Inclusion/Exclusion Criteria

Three over-arching schemes have been used to screen papers on health care/service organisation and delivery to people with mental illness in prisons: quality of the evidence, relevance to the review and theoretical framework. Given the breadth of subject matter, the various theoretical and philosophical approaches and the mixed methods encountered, the criteria developed within these schemes are necessarily loose. Papers were, however, selected independently by three reviewers, and where differences in opinion about inclusion and exclusion were observed, these were resolved through discussion.

4.2.6 Quality of Evidence Contained in the Study

It was determined that all selected references must report findings rather than the author(s)' opinion. Included studies therefore take the form of research, inquiry, investigation or study. Commentary or simple (not replicable) description of local innovation have been excluded (see Fulop et al 2001), but a full list of excluded papers is given as a guide to possible areas of good practice.

Once a review extends its scope beyond randomised control trials, the assessment of the quality of the evidence inevitably becomes more complex and more reliant on informed researcher judgement (Murphy et al 1998). This is particularly challenging in reviews of service delivery and organisation reviews because of the wide range of research methods and approaches encountered. Quality criteria are not, therefore, used primarily to exclude poorest quality evidence, but to assess the strength of evidence and the weight that findings should be given in the synthesis and conclusions of the review (Mays et al 2002).

Although hierarchies of evidence are available for the assessment of quantitative health service research, this is not appropriate for qualitative research. There are a number of questions that can be asked to help judge the 'validity' and 'reliability' of much qualitative research (see Popay et al 1998; Mays and Pope 2000; Blaxter 1996), but these have drawbacks in the present context. First, there are no specified criteria to be met – the reviewer must ultimately make a judgement about inclusion. Second, they generally refer to qualitative research below the level of the 'organisation', that is, judgements are made with reference to specific 'subjects' and subjective experiences, rather than with reference to the structures and processes across and between organisations that are the focus of the present review. Yet again, this demands a judgement of research quality by the reviewer. In the present review, the task was further complicated by the paucity of rigorous qualitative research on health care delivery and organisation for mentally disordered offenders in prison: if published criteria were used to select studies of adequate quality, almost all work published in this field would be excluded.

For the purpose of this review, it was therefore decided to include all self-proclaimed research studies, but to give some details about method so that the final synthesis could accord appropriate weighting to studies with clear definitions of the service evaluated, use of an appropriate method, and acknowledgement of limitations and error.

4.2.7 Relevance to the Review

All studies included were specifically concerned with issues affecting the delivery of health services to people with mental health problems in prison. This criterion excluded studies concerned only with physical/ general healthcare, studies of mentally disordered offenders in other settings, studies of prisoners who do not have defined mental health problems, and studies concerned only with re-offending rates. Studies conducted outside of western cultures were also excluded, as further work would be necessary to assess generalisability to the UK.

Table 4.1 Summary of Inclusion/Exclusion Criteria for Studies of Service Delivery and Organisation

Over-arching Scheme	Inclusion and Exclusion Criteria
Quality of evidence contained in the study	Include studies that present research, inquiry, investigation or study (exclude opinion, commentary and simple descriptions). Include all relevant studies, but give indication of clarity of definitions of the service/subjects studied, comment appropriateness of method, and acknowledgement of limitations and error.
Relevance to the Review	Include only studies specifically concerned with issues affecting the delivery of mental health services to people with mental health problems in prison. Exclude studies conducted outside of western cultures.
Theoretical orientation of the study	Conceptual analyses and theoretical papers are included in the final list of research studies to inform the theoretical framework for synthesis of findings, and to inform future research methodologies.

4.2.8 Theoretical Orientation of the Study.

Within qualitative research, theory has a pivotal role in the interpretation of data. The extent to which researchers have sought to link their work to wider theoretical frames is a key aspect of many schemes developed to assess the quality of qualitative research. Although papers based solely on theory do not strictly fit the inclusion criteria for this review, they have been included to develop a theoretical framework within which to explore the relationships between findings from different studies, and to provide possible methodologies for future research.

4.2.9 Categorisation of References

Given the breadth of the area reviewed, all studies were categorised primarily according to subject area. Where studies cover more than one category, they have been written up in that which they fit most closely. (Numbers in brackets indicate numbers falling into each category). A comparison is given in the Table below of the number of papers, by category, finally included in the original review (2004) and the updated review in 2007.

4.2.10 Included Papers (103)

Type of Paper	2004	2007	Total
Theoretical papers	9	0	9
Therapeutic community	5	0	5
Review papers	12	3	15
Evaluation	11	3	14
Audit	4	0	4
Pathways	1	4	5
Needs assessment	3	0	3
Organisational research with systems /models	2	1	3
Screening	9	9	18
Professional roles/ training	10	3	13
New interventions	0	1	1
Service users	0	4	4
Specific groups of prisoners	6	3	9
Total	**72**	**31**	**103**

4.2.11 Excluded Papers (248)			
Reasons for Exclusion	**2004**	**2007**	**total**
Descriptions of specific groups of MDOs with no explicit implications for treatment	5	14	19
Research into MDOs that does not refer to prisoners OR to mental illness	18	27	45
Service descriptions– some examples of good practice that may be useful	12	5	17
Opinion/viewpoints/commentary/dissertation abstracts/ conference or symposium abstracts	25	20	45
Policy papers	12	0	12
Guidelines/standards/recommendations that are not evaluated	14	6	20
Descriptions of problems of current system, needs of mentally ill in prison	13	3	16
Ethical issues/rights of prisoners	4	1	5
The Law and Mentally Disordered Offenders	6	0	6
International studies (problems generalising to UK)	12	4	16
Referring to juvenile offenders	0	47	47
Published pre-2002	-	4	4
Total	**121**	**127**	**248**

4.3 Results

The results are presented by category with an overview of the issues raised in papers included for that section (for more detail about specific studies, see descriptions given for each paper in 'Included Papers' Section 4.6). Each category is followed by a list of the most obvious gaps in the research in that area and/or implications for future research.

A list of references of all included papers is given with a brief description of all key papers. This is followed by a list of excluded papers with a brief summary of selected papers.

4.3.1 Theoretical Papers

A number of papers provide sophisticated theoretical and conceptual analysis of services for prisoners with mental health problems. They touch on issues that are explored in more depth in the research reported in subsequent categories, but place these in a broader sociological context. Many are underpinned by debate about the function of prisons: rehabilitative and restorative vs. for punishing and protective. The case for the latter (most frequently associated with 'the criminal justice system') lies in the minimisation of risk. Arguments supporting a more rehabilitative regime (mainly put forward by 'the mental health system') are associated with decreasing levels of security. Within contemporary society, which is increasingly concerned with avoiding risk, there is enor-

mous pressure, fed by the media, to punish 'mad criminals' and incarcerate them indefinitely to guarantee maximum security. Despite the infrequency of a person with serious mental illness committing a serious offence, the publicity afforded such cases has created a generalised terror of criminals with mental illness among the public at large. As a consequence, the discrimination suffered by people with a criminal history, or a diagnosis of mental illness is magnified for offenders who have mental illness within society as a whole, within the criminal justice system and within mental health services. Dvoskin and Patterson (1988) make the point that 'community acceptance of mentally disordered offenders depends upon the forensic system's ability to manage the most disturbed individuals'.

Yet there remains the view among these theoretical papers that problems in the support of mentally ill prisoners lie, in the main part, in the separation of two approaches working within the same system (Freeman and Roesch, 1989; Kunjukrishnan and Bradford, 1985; Hylton, 1995). Mental health and criminal justice services exist in 'parallel universes' (Cruser and Diamond, 1996) with contradictory values and goals, which are reflected in training, day to day practices and cultures. This separation of mental health care as a distinct entity within the criminal justice system means, in short, that MDOs are seen quite simply as offenders who happen to have mental illness. This leads to mental health care in prisons which is:

a) Seen as quite separate from the day to day running of the prison; something independent of the environment (even though evidence suggests that prisons are hazardous to physical and mental health);
b) Too often linked to severity of crime (the more serious the offence, the more likely they are to receive care in a special hospital);
c) More likely to be ignored if problems are minor and/or do not interfere with the smooth running of the criminal justice system (e.g. depression, or mental illness in older prisoners);
d) Frequently conceived as addressing one homogeneous group. Assumptions of homogeneity have some validity in terms of the socio-demographic characteristics of prisoners (who are predominantly young, male and socially disadvantaged), but this preponderance can lead to the neglect of minority groups e.g. women and older people with fewer services available to meet the specific needs of individuals within these groups than are available for working age men.

The disconnection of 'care' and 'custody' within prison systems inevitably affects the nature of research into prison mental health such that the specific effects of mental illness in a prison environment are inadequately addressed. For example, whereas difficulties encountered in a community setting may be lack of structure to the day, problems with daily living such as paying rent, buying food, using public transport, finding employment, none of these are relevant in a prison setting. Within this environment, difficulties may be met in coping with boredom, structure, discipline, close contact with others and exploitation by other prisoners. Similarly, there is no research that directly assesses the effects of the prison environment upon mental health.

Moreover, there are a number of factors which suggest that, rather than those who are not mentally ill receiving one ('criminal justice') approach, and those who are mentally ill receiving another ('mental health') approach, all prisoners may well benefit from one integrated system with a shared philosophical basis and culture. They are not, after all, two distinct populations: causes of crime are similar to causes of mental illness; predominant populations of offenders share many socio-demographic characteristics with predominant populations with serious mental illness; and. a high proportion of prisoners who have mental health problems remain in the main prison - not all are identified, and of those who are, not all are treated in special healthcare units.

Not surprisingly, these theoretical papers, the vast majority of which are written by advocates of a 'mental health' approach, feature a common plea for a humane and respectful culture that promotes mental health, prevention of mental illness and reduction in psychiatric relapse among prisoners.

Three papers (two of which are by the same author and linked Wolff, [2002a,b]), provide frameworks for understanding the organisational culture of prison mental health care. Cruser and Diamond (1996) provide a potentially useful model for understanding the conflicts between value bases of the two competing systems and for describing changes in the system. This model describes the development and maintenance of the personal values of staff within the cultural and social policy context of either the health or the criminal justice system. The authors argue that these personal values culminate in opposing collective unconscious value systems, which, in the case of prisons, serves to block improvements and change in the provision of mental health care. The authors use this model to illustrate gradual convergence of values among different workers in a prison undergoing change.

Wolff (2002a), however, is pessimistic about the prospect of improving the care of mentally disordered offenders through the integration of systems. She locates the problem in the wider social and political system: fragmentation of funding, inconsistencies and inadequacies in the funding system leads to rivalry, competition and 'passing the buck' rather than co-operation and collaboration. She cites the failure of previous attempts of multi-agency working in community mental health in the US to support her argument that public organisations are intransigent and inflexible.

In a second linked paper, Wolff (2002b) extends this perspective in a description of the various (failed) incremental integration approaches adopted by the UK government in recent years. She proposes a 'single ownership model' of integration as an alternative strategy, which minimises costs and maximises integration potential. This model merges the responsibilities and functions of separate entities under a common organisational structure. A stable cross-systems infrastructure is considered appropriate for MDOs because the complexity of their needs requires an inter-related response from multiple services, which is co-ordinated from one holistic entity. Wolff provides an extensive rationale for this holistic approach, and clear guidelines for its function and mandate. She concludes (p242) 'Collective responsibility for those who are the least advantaged and for whom the system and service boundaries are the thickest, and the clinical and social risks are the highest, offers the greatest hope for achieving the promise of the community care model …'.

Other authors (Wardlaw, 1989; Hylton, 1995; Kunjukrishnan and Bradford, 1989) have sought solutions at a direct service provision level rather than at a structural level. They have reviewed the organisation of distinct services for mentally disordered offenders within the prison and healthcare system When all advantages, disadvantages and trade-offs are considered, they conclude that the optimum solution lies in a range of different services being available at a local, regional and state-wide/national level in order to meet the heterogeneous needs of mentally disordered offenders.

4.3.2 Therapeutic Communities

A number of studies describe the development and operation of 'therapeutic communities' within prisons (Smith, 1984; Light 1985, Cullen 1988). Although these relatively dated papers constitute 'service descriptions' rather than research, they are included to illuminate regimes that have worked towards the integration aspired to in the theoretical papers (above). Theorists have discussed the problems of a system in which the management of prisoners is separated from their care, and proposed a shared humane, respectful and supportive

culture. This is consistent with the therapeutic regime in therapeutic communities provided for small groups of prisoners with particular difficulties. Although these units do not appear to have demonstrated a 'therapeutic' effect in terms of prisoners' mental health (see previous chapter – review of interventions), they have facilitated the management of prisoners who were otherwise disruptive and difficult to manage. And it might be suggested that they have gone further than this, enabling some prisoners who were previously channelling their energies into sabotaging the system, to use their skills more constructively in the production of art and literature.

4.3.3 Reviews

There have been no systematic reviews of service delivery and organisational issues for mentally disordered offenders in prison over the time period of this review. The most comprehensive review to date has been published by the NHS Centre for Reviews and Dissemination. They provide a 'broad' review of the literature on the health and care of mentally disordered offenders (1999) but given the breadth of the subject area and the limited resources available focused on only 7 key areas. These did not include issues relating to service models and organisational approaches. However, drawing on gaps in the literature, the authors make specific recommendations for further research to strengthen the 'academic' and 'evidence' base, including further, more focused, reviews.

One further review focusing on the broad area of research into mental health care in prisons (Shaw, 2002) confines itself to ongoing research studies that have received funding, are registered on the National Research Register (NRR), or have been approved by the prison ethics committee. This identifies only one study in the area of service delivery and organisation, one focusing on multi-disciplinary team working, and one on staff training (none yet published). Not surprisingly the recommendations for further research are broad: more evaluation of service delivery systems, shared information systems and novel services.

A number of papers, which themselves claim to be reviews, provide 'personalised' updates on the state of mental healthcare in prisons (Eastman, 1993; Jemelka et al, 1989; Lucas, 1999; Lamb et al, 2001) with emphases reflecting the interests of the authors. Overall, these demonstrate that efforts to improve the mental health of prisoners have placed an emphasis on service systems rather than individual interventions. Yet the efforts to articulate 'what needs to be done' do not appear to be met by accounts of actually 'doing it'.

More recently published reviews (Sacks, 2004; Chandler et al, 2004) have focused on prisoners with co-occuring substance use and mental health problems. Chandler et al (2004) discusses the challenges of translating a community "Integrated Treatment" model into the prison environment, and Sacks (2004) reviews various responses to this client group across the USA correctional systems, and found that there was a huge variation in treatment models and duration of programmes. They call for further research in evaluating exactly what constitutes effective treatment in prison for this group. Both papers also highlight the importance of aftercare for this group to prevent the rapid cycling between acute psychiatric care and prison.

Byrne and Howells (2002) review the literature on the needs of female offenders and call for appropriate management with specific women's programmes that are based on research findings.

As evident in the number of excluded papers providing commentary/opinion with recommendations for practice, the literature is replete with recommendations, guidelines and standards with very few studies attempting to assess the effectiveness of these statements, nor to describe empirically their implementation.

4.3.4 Evaluation of Services

Studies that use routinely collected data to report effectiveness of a specified programme/system of mental health care have been categorised as evaluations rather than research. Descriptions of innovative services with no assessment of effectiveness have been excluded.

Evaluations of local innovations may provide models for others to follow. For example, in a programme to implement the CPA in one prison, Rapaport (1998) reports on the development of a shared protocol, a new information system development, and staff training across 6 NHS Trusts resulting in better tracking and communication. Weaver et al (1997) describe the development of a dedicated service for male remand prisoners providing effective assessment of mental health problems and transfer to appropriate care; Bannerjee et al, (1995) also describe a system of mental health assessment and appropriate transfer that provided significant improvements over other similar services.

Young (2003) reports on the prevalence of co-occuring disorders in a New York jail, and describes an innovative service for this group. They advocate greater links between jail and community services.

Brooker and colleagues (2005) surveyed the mental health inreach teams in English prisons. They found that the establishment of this service had been a success, but was under-resourced and the workers felt unclear about their role. They advocate that PCTs think creatively about how they manage their resources in relation to funding prison and community services.

Elger et al (2002) compared the prescription of hypnotics and sedatives to males aged less than 39 years old in Geneva prison outpatient service with that of a University Hospital (Medical Policlinic – 'MP') in the same geographical area. They found that drug prescription was more common in the prison setting than in the MP setting. There were also differences in the types of drug being prescribed, for example, the rate of prescription of psychotropic drugs was five times more common in the prison, and 48% of prisoners sampled were treated with benzodiazepines compared with 5% of MP patients. However, the use of antidepressants was more common among the MP group. These differences persisted when comparison was restricted to patients who were not defined as drug addicts, and therefore the difference was thought to be related to factors associated with becoming a prisoner e.g. anxiety and sleeping trouble.

Common components of effective programmes appear to include the development of clear local policy/guidelines, collaborative working with local health care services, and training for all staff involved. Generalisability of these local evaluations cannot, however, be assumed: every prison is different in population, culture, organisation and practice, and the availability of appropriate NHS beds varies between Regions.

4.3.5 Audit of Services

Two studies have compared practice against existing guidelines. In the first study (Robbins, 1996) this proved difficult, as service standards were not available. Although Local Authorities were working towards Reed Review targets, progress was slow, the infrastructure and information systems were inadequate and training was not targeted. Although Reed and Lyne's (2000) study had clearer guidelines to compare against, prison mental healthcare systems fell well below expectations. The questions remain: is it possible to implement given guidelines, and if they are implemented, do they have an impact on prisoners' mental health?

4.3.6 Pathway Research

Between the years 2004 to 2007 there has been a relatively high increase in the amount of literature on care pathways for prisoners with mental health problems with three additional identified studies. Porporino and Motiuk (1995) compared 36 prisoners with psychosis with 36 non-disordered offenders in a similar situation. Mentally ill inmates

were less likely to get early release on full parole, and when released, were more likely to have their supervision revoked despite the fact that offenders in the non-disordered group were more likely to commit a new offence. This is a useful study, which suggests that even within the prison population; mental illness is the source of discrimination and further exclusion.

Peters et al, (2004) undertook a survey of services for people with co-occurring substance use and mental health problems in the USA prisons. They found that specialist services for this group led to better integration with community services, prison services and more use of multi-disciplinary workers (rather than psychiatry alone)

Pyszora and Telfer (2003) undertook a study to look at the implications of using enhanced Care Programme Approach to identify and coordinate care for prisoners with mental health problems in a high security prison in London. They discuss the challenges of using CPA in prison with the fluidity of the prison population.

Smith et al (2003) examined the existing contact that prisoners had with community mental health services, and found that most had been in contact with psychiatric services at the time of detention, but very few received contact whilst in prison. They advocate a greater liaison between prison and community mental health services especially in facilitating aftercare plans on release.

Shelton (2005) investigated mental health treatment patterns, services and costs for young offenders, and any possible relationship with age, gender, race, level of crime seriousness or number of episodes of incarceration. This paper shows that 53% of the youths sampled met criteria for a diagnosed mental health disorder, but only 26% of them received any treatment whilst in the juvenile justice system. Furthermore, 2% of the sample were not diagnosed with a mental health disorder, but nevertheless received treatment. The main types of treatment utilised were family therapy, group therapy, individual therapy and medication, although the latter was given to just 0.09% of the sample. The paper also shows that there was a racial bias to treatment given – with African Americans being proportionately less likely to receive treatment, and Caucasians being proportionately more likely.

4.3.7 Organisational Research

Only three studies have been identified that take an explicitly 'organisational approach' to the study of 'jail' mental health programmes (Morrissey et al 1984; 1983; Fowler et al 2005). The studies by Morrissey et al tackle questions related to effectiveness in organisational terms, rather than the effectiveness of a programme for individual prisoners' mental health. The research provides valuable insights into the influence of contextual factors, the complexity of the system as a whole, and the futility of seeking a single ideal solution. Different models suit different circumstances, and every model of service delivery has advantages and disadvantages. Findings appear to suggest that organisational or inter-organisational research may provide a fruitful path towards understanding contextual influences on prison mental health programmes and raising awareness of the trade-offs associated with different models.

Fowler et al (2005) audited the prisoners awaiting transfer to special hospital care and found that the wait for this can be months. There are issues lack of suitable beds, disputes over diagnosis and treatability, and lack of discharge planning on return to prison.

4.3.8 Needs Assessment

Needs assessment is always complicated by the problems beset in distinguishing 'need' from 'problem', or 'need' from 'want'. And – perhaps particularly in the case of prisoners – different stakeholders have contradictory views on how need should be defined. Cohen and Eastman (2000) provide a useful analysis of needs assessment for mentally

disordered offenders with an emphasis on the notion of need as 'ability to benefit'. They do not, however, arrive at any firm conclusion. In assessing need, they conclude, the aims of the exercise will determine optimum method and for this reason purchasers need to be clear about level (individual or aggregate) and type (e.g. group of MDOs) of data they require.

In a second paper, these same authors examine ways of measuring the extent to which 'needs are met' – that is, the measurement of outcome in mentally disordered offenders. As with any group whose needs are multiple, complex and fluctuating, outcome measurement is fraught with difficulties. Cohen and Eastman (1997) present a model for evaluating services in terms of input, process and outcome as one way of overcoming the practical, theoretical and ethical difficulties of conducting randomised trials in prisons.

Patrick and colleagues (2000) describe the use and effect of the Health Needs Assessment Schedule in developing services at Belmarsh prison. The schedule (described in excluded papers section) has been designed to enable a team to identify key areas for improvement and set goals and priorities for improving their services. In this account it identified subtle areas for improvement (such as prisoners taking control of their own health) as well as more concrete goals (such as staff re-profiling). Although the paper describes the development of an action plan, it does not report on the implementation of that plan.
The absence of any contribution from prisoners themselves in the definition of 'need' is notable. If prisoners' own views of their needs to improve mental healthcare were known, this may well inform services which are more accessible, acceptable and effective.

4.3.9 Screening for Mental Disorders

Between 2004 and 2007 the number of studies on the detection of serious mental illness by criminal justice staff has doubled from nine to eighteen. The speed of the criminal justice process, from arrest, charge, first court appearance and custodial remand, can be so rapid that a person's mental disturbance can go undetected (Fazel et al, 2001). All inmates need early assessment, but there is no consensus about the best tools, methods, staff or timing of this assessment and current screening practice appears to pick up only 25-33% prisoners with serious mental illness. Current screening practice is inadequate in terms of environment, skills of assessors and subsequent referral for treatment (Birmingham et al, 2000).

Screening instruments have been developed in the US and the UK. The Referral Decision Scale (developed by Teplin and Schwartz 1989) has been tested in a variety of situations; it has high levels of sensitivity, but also high levels of specificity – being focused on people with severe psychotic and affective disorders. More recently the Health Screening Questionnaire has been developed in the UK to detect a broader range of mental and physical health problems that require immediate treatment. It aims to operate as a triage, with an additional, full health assessment taking place during the first week. This has a higher sensitivity rate of 90%, but lower specificity (i.e. generates more false positives). It requires specific training which takes into account the particular needs and possible behaviour of prisoners that might skew findings. It has been tested in 6 male remand prisons (Grubin et al, 1999) and in two women's prisons (Grubin et al, 2000) with high levels of success in identifying mental health problems.

A number of studies (Earthrowl and McCully, 2002; Retslaff et al, 2002; Gavin, Pearsons and Grubin, 2003; McClearen and Ryba, 2003; Nicholls et al 2004; Mills and Kroner, 2005, Black et al, 2004) have examined the sensitivity and usefulness of screening tools when compared with usual screening procedures. The findings suggest that validated tools may be more time consuming and throw up more "false positives" but also can identify up to twice as many prisoners with serious mental health problems. More re-

search is needed in stream-lining measures to retain sensitivity, but speed up time of administration in busy prison environments.

Two studies report on development of new tools. Anthony and McFadyen (2005) report on the development of a prison specific screening tool: the Prisoners Mental Health Inventory, and Birmingham and Mullee (2005) developed a simple 6 point behavioural observation tool to be used by prison officers to pick up signs of serious mental illness. It showed promise as a quick way of detecting mental illness but requires more research to demonstrate effectiveness in other settings.

Questions remain about the mental health of prisoners who are not picked up at initial screening: How should their problems be identified? Is regular screening necessary? Also, what are the best tools for assessing the specific mental health problems of prisoners? There is little information about the appropriateness of existing norms of assessment schedules when applied to the prison population. A number of studies focus on establishing the validity of instruments in a prison setting (Gallagher et al, 1997; Wang et al, 1997; Boothby and Durham, 1999). Most questionnaires need further development to render them completely appropriate for a prison population (e.g. Beck's Depression Inventory (BDI) question on 'feeling in need of punishment, or questions about believing you are being plotted against).

4.3.10 Studies of Specific Groups

The particular needs of women, older prisoners, younger prisoners and prisoners from minority groups have not been researched in depth. Although a number of studies identify their needs (women – Veysey, 1998; York CRD, 1999; Teplin and Abram, 1997; Gorsuch, 1998. Children – Kurtz et al, 1998. HIV/AIDs infected prisoners – Mayer, 1995), few studies have evaluated ways of meeting these needs.

One particularly interesting study compares women who have proved 'difficult to place' in NHS beds, with those who were accepted for NHS beds (Gorsuch, 1998). Those who were difficult to place were not only more disturbed and disabled, they had also suffered significantly more abuse yet they were more likely to be perceived as 'untreatable'. This raises questions, yet again, of how best to manage those who are not believed to be deserving of treatment. Further research into therapeutic alternatives for this exceptionally vulnerable yet disturbed - and disturbing group - is required.

Regan, Alderson and Regan (2002) and Reviere and Young (2004) both study older prisoners. The former paper states that "older psychiatric prisoners were found more likely to have been convicted of murder and other violent crimes" (2002:121) and that of the crimes committed by elder male prisoners, 27% were sex crimes. The researchers ask for additional research to be conducted to compare the older mentally ill prison population with the older general population. They also point to issues surrounding providing healthcare to an ageing prison population in the future as this has huge financial implications and it may be that an alternative to prison needs to be found for older offenders. Reviere and Young (2004) report on a survey of services offered to older female prisoners. They compared the level of service provision in female prisons reporting that more than 10% of their population was aged 50+, with those reporting that less than 10% of their population was aged 50+, and also those prisons who expected their population to age (i.e. anticipated having larger numbers of older women in the future) with those who did not. They found that on the whole, there was no difference in the likelihood of services being offered between the groups of prisons. The authors recommend a more multi-disciplinary approach to mental health care -not just psychiatry as a way of countering likely increases in the financial costs of providing care to this population, and also call for more training for criminal justice staff to enable them to make appropriate referrals for prisoners with more serious illness.

Warren and South (2006) explore the relationship between Anti-Social Personality Disorder (ASPD) and psychopathy in 137 female prisoners, and also the relationship of these constructs with patterns of criminal behaviour, psychological and institutional adjustment, co-morbidity with other personality disorders, and victimisation. Their sample was divided into women screening positive for ASPD only (using SCID-II), women scoring 25+ on the PCL-R (psychopathy checklist - revised screening tool) only, women screening positive for ASPD and scoring 25+ on the PCL-R, and women who were not diagnosed with either ASPD or psychopathy. Results suggest that ASPD was associated with impulsivity, aggression and irresponsible behaviour; recklessness; increased likelihood of childhood abuse; and greater co-morbidity with cluster A personality disorders. The ASPD only group also reported higher rates of paranoia, somatic anxiety and psychological distress than the other groups (2006:16). Psychopathology was associated with higher rates of property crime, previous incarceration and manifestation of remorselessness. Individuals in this group reported lower levels of psychological distress than those in the other groups.

There is still little research attention paid to developing and evaluating services for prisoners with dual diagnosis of mental health and substance use in the UK, which is surprising given that there is a high prevalence of this group in prisons, and this is associated with poor treatment outcomes, re-offending and social exclusion.

4.3.11 Roles and Responsibilities of Different Professional Groups

A number of papers offer a description of the roles of different professional groups involved in the mental health care of prisoners: police (Fahy, 1989), prison officers (Lombardo, 85; Applebaum et al, 2001), Psychologists (Towl, 1999), probation officers (Roberts et al, 1994), psychiatrists (Helbrum et al, 1992; Reiss and Famoroti, 2004 – successful MRCPsych candidates; Shah, 2001 – child and adolescent forensic psychiatrists), and nurses (Rogers and Topping-Morris, 1996). Many of these studies go on to establish the gaps in training for these groups, or inadequacies in resources. For example, Reiss and Famoroti state that too few trainee psychiatrists are being given the opportunity to experience working in a prison environment as part of their training, and that it should be a mandatory objective of basic specialist training to "provide trainees with a basic understanding of the factors relevant to the practice of psychiatry within prisons, as well as knowledge of the relevant general and forensic psychiatry services that can care for mentally disordered offenders" (2004:22).There is a strong case put forward in the above papers for changing the training of prison officers so that they have a greater role in observation, monitoring and support of prisoners with mental health problems. This may lead to greater collaboration between prison officers and healthcare staff – this has not, however, been researched.

Three papers focus on the development of nursing services through strategic changes in assessment and support systems (Yates, 1994; Polczyk-Przblya and Gournay, 1999; Rogers and Topping-Morris, 1996). However the training needs of prison mental health nurses are not detailed.

Doyle (2003) conducted a focus group and in depth interviews with registered psychiatric mental health nurses delivering care in an Australian prison setting to examine issues that they identified as significant to their practice in the prison environment. Nurses stated that they had few opportunities to reduce prisoners' anxiety levels (and thereby attempt to prevent deterioration of mental health) when individuals were first admitted to the prison. They also stated that the prison environment itself isn't always conducive to providing good mental health care. Nurses often had to work in overcrowded conditions/in the company of uniformed prison staff, and the physical surroundings of the prison, and overcrowding were thought to exacerbate a range of mental health issues. Additionally, nurses stated that there was a

conflict between providing healthcare and prioritising security and containment ahead of this. Finally, in some cases, prisoners would oppose nurses' authority in order to gain status among their peers. Thus there are a number of challenges facing psychiatric mental health nurses delivering care in prisons.

Young (2002) reports on a retrospective review of mental health service provision by social workers to 359 mentally ill inmates in a county jail in New York. Male inmates stayed longer on the mental health unit than females, and inmates with psychotic disorders had significantly more service episodes. White people also stayed longer on the mental health unit than people from other ethnic groups. This paper states that many inmates spend a very short amount of time on the mental health unit, and therefore more emphasis should be placed on release planning.

4.3.12 Service Users

In 2004 no identified study could be found that examined the role or contribution of service users – there are now four an encouraging increase. Morgan et al (2004) conducted a survey of prisoners with mental health problems about their attitudes and perceptions to mental health services. Only a third had received mental health services, and on the whole expressed a preference for individual rather than group counselling. Newly incarcerated inmates were more likely to hold negative views of services and were unsure of how to access them. They recommend more information at reception regarding mental health services and how they can be accessed.

Nurse et al (2003) looked at the impact of prison on mental health in a series of focus groups in a male local prison in England, and found that issues of isolation and boredom lead to drug use. The prisoners also reported loss of contact with family and close contacts and difficult relationships with staff as having a negative impact on mental state. Prison officers reported that they felt unsupported, worked in negative culture, and had high levels of stress, which led to high levels of staff sickness.

Spudic (2003) reports on the results of a consumer satisfaction questionnaire administered to inmates in a state prison mental health unit over a two-year period. Questions were rated on a 5-point Likert scale, with mean ratings being shown as between 2.9 and 3.8 – mainly rated as "good" but with room for improvement. Spudic states that one limitation of these types of surveys is that in some instances, effective mental health care may actually lead to consumer dissatisfaction as for example, psychotic inmates may have a negative view of being on medication even though medical staff feel that this is in their best interests. No statistical analysis was performed on the data collected to compare levels of satisfaction for different groups.

Finally, Vaughn and Stevenson (2002) report on a survey of 50 mentally disordered prisoners (both sentenced and remand), which investigated how responsive they felt mental health and criminal justice services, were to their perceived needs whilst in the community. Results showed that mentally disordered offenders often had a very negative view of the police – it may be that more training is required for the police to ensure that they are more sensitive to the needs of mentally disordered offenders at the point of arrest. Similarly, Probation Officers and Social Workers were often viewed by the prisoners as authority figures interested in compliance rather than rehabilitation. The authors state that mentally disordered offenders can fall into a gap between the criteria for access to forensic psychiatric services (where their needs may be judged as not serious enough), and mainstream services (where their needs may be viewed as too complex). Often offenders are released from prison with no real after-care plan, and are unable to access services until they reach crisis point. Many stated that they would not seek help themselves. Therefore, the authors recommend the use of assertive outreach style services to reach this popula-

tion and state that there is a clear need for community services to broaden their referral criteria and focus on need as opposed to diagnosis.

4.3.13 New Interventions

Manfredi et al (2005) describes an innovative telepsychiatry service in a rural prison in USA, which has been acceptable to users, and has shown to be cost effective as it has reduced the need for prisoners to be transported to the nearest city for a psychiatric consultation (with 2 officers).

4.4 Discussion

4.4.1 Limitations of This Part of the Review

The selection of papers for this broad review of research into service delivery and organisation was not clear-cut. The decision to include or exclude a paper rested on the reviewers' judgement about the generalisability of the content. Another reviewer may have included more of the service descriptions that provided data on the population and their disposal, or more commentary papers with a review section. Alternatively, a decision could have been made to exclude papers reporting on a small, local sample, or review papers that did not specify a research strategy. This being the case, inclusion criteria were interpreted generously.

Once all 'included' papers were compiled, a system of categorisation was determined, but once again this was not a precision exercise. Categories were not mutually exclusive, and papers often bridged more than one area, the potential problems arising from this have been overcome by integrating findings from different categories in the discussion of the findings.

The summaries of 'included' papers are brief, and attempt to give an impression of both method and findings. Whereas many outcome studies lend themselves to a tight system of describing method and findings which give an immediate impression of the quality of the research, this is not the case for studies into organisational and service delivery issues: there are no 'off the shelf' rating scales assessing the quality of this broad typology of studies.

4.4.2 Overall Comments

Given the breath of the subject area and the variety of methods/approaches, it is difficult to draw general conclusions. What can be said, however, is that almost all studies conclude with recommendations that support current prison mental health policy, and numerous papers (both included and excluded) summarise policy, or provide more detailed guidelines and standards. Relatively few studies review the practical implementation of policy through assessment of adherence to standards and guidelines and there is a total absence of studies which:

a) Assess the process of implementing current policy/guidelines
b) Assess the effectiveness of current policy/guidelines in achieving their own goals.
c) Assess the effectiveness of different models of mental health care provision within a UK prison context.
d) Examine the role of NHS commissioning in ensuring care/treatment for prisoners with mental health disorders.

The starting point for the provision of effective mental healthcare in prisons is the identification of those who need support. The development of an effective health-screening tool has provided a positive means of detecting mental health problems at reception and a useful vehicle for training prison officers and mental healthcare staff in the identification of mental health problems. This provides the basis of a programme of research to determine appropriate assessment tools and procedures (including training) for ongoing mental health assessment, and for the assessment of, and care planning for, specific mental health problems. It is therefore most encouraging that this aspect of the literature has grown significantly

in the past four years.

All prisons differ, and what works in one prison may not be effective – or even feasible - in another, therefore evaluations of local innovative practice are an appropriate and useful way of monitoring and informing local service development. Cohen and Eastman (2000) provide a pragmatic framework for evaluation research, which gives useful guidance for describing 'input', 'process' and 'outcome' from the perspective of different stakeholder groups. It is disappointing that very few studies can be identified where small-scale but robust local evaluation has taken place.

At a more general level, theoretical papers have clearly illustrated the potential difficulties (and the reasons for these difficulties) in integrating the contradictory cultures or 'parallel universes' of mental health and criminal justice systems, but there is very little research into the organisation, culture and service systems within prisons. Wardlaw et al (1996) conceptualise the main difficulties in the provision of effective prison mental health care lying in conflicting value systems operating within the same system. The challenge for research therefore, lies in examining beliefs (and changes in beliefs) about offenders with mental health problems. This research team has developed and utilised an organisational and social policy model as a means of understanding and illustrating the changes in values of individuals' values (and therefore the collective value system of the organisation) over a period of service improvements. This model may provide a useful tool for others seeking to measure movement towards stated goals of co-operative inter-agency, multi-disciplinary working.

Morrissey et al (1983; 1984) go beyond the confines of the prison environment to examine inter-organisational relationships and the impact of different systems on mental health care provision. Again, these authors provide a model for future research: Newman and Prices' (1977) typology of organisational arrangements for service delivery into jails provides a means of analysing and interpreting findings.

Cross-cutting issues that are of importance at all levels and in all services providing mental health care for offenders include: training (for all staff), and approaches to meet the needs of the entire spectrum of prisoners. Little is known of the impact of training on practice, nor of the impact of more therapeutic practice on the mental health of prisoners, but all studies reported here suggest that training of all staff is inadequate. Similarly, there is substantial evidence that the particular needs of minority groups of prisoners (e.g. women, elderly, ethnic minority groups) are not met, but significantly more research is needed into 'what works for whom' in the prison context.

4.6 Included Papers[1]

4.6.1 Theoretical Papers

Cruser A, & Diamond PM. An exploration of social policy and organizational culture in jail-based mental health services. Administration and Policy in Mental Health 1996;24:129-48.

Provides a theoretical framework for analysing changes in organisational culture and tests in one developing jail. Although the changes implemented/evaluated are not clear, this model appears to have potential to underpin organisational research. It is based on the assumption that people and systems translate unconscious values into social policy action, therefore the policies of an organisation reflect its collective unconscious value system. Effective organisations clearly define their values and establish compatible social policies. Mental health and criminal justice systems derive from different values and beliefs about causality (e.g. therapy vs. custody; treatment vs. punishment) and problems result from these 'parallel universes' with conflicts within and between systems both operating in the same system. They therefore need conceptual bridges to work towards shared values,

1 *organised alphabetically within each category*

which will facilitate more effective working in a common environment. A model for understanding problems, solutions and transformation in the system is illustrated.

Dvoskin JA., Patterson RF. Administration of treatment programs for offenders with mental disorders. In Wettstein R.M. (Ed) Treatment of offenders with mental disorders, New York: The Guildford Press, 1998

Focuses on politics and philosophical context of the treatment of MDOs. Compares implications of minimising risk (indefinite incarceration) vs. maximising rehabilitation (decreasing levels of security) in a context of finite resources and ever increasing numbers of MDOs. Reviews assessment of risk, services and locations, staffing levels and training and public presentation.

Conclusion: minimisation of risk is essential because community acceptance of MDOs depends upon the forensic system's ability to safely manage those few patients who pose the highest degree of risk to public safety.

Dvoskin JA,.Steadman HJ. Chronically Mentally-Ill Inmates - the Wrong Concept for the Right Services. International Journal of Law and Psychiatry 1989;12:203-10

Debate about ways of measuring disability within prison upheld by a survey of 9.4% of all prisoners in New York prison system in May 1986 (n=3684). Three sources of information: prison healthcare staff documented physical problems; correctional counsellors assessed behaviour; mental health services staff assessed functioning and psychiatric disability of all those who had contact with mental health services in the previous year. Findings: 8% had severe disability and 16% had significant disability – 25% therefore required mental health services. Discussion: any assessment needs to be based on functioning in prison, as disability and chronicity within the community refers to difficulties with living (such as housing, finances, going out, structuring day) that are not relevant in a prison (where food, clothing, shelter and structure are provided). Problems encountered in prison (e.g. predatory inmates, discipline, visits, isolation from family) may reflect different types of susceptibilities and require different interventions.

Freeman RJ., Roesch R. Mental disorder and the criminal justice system: a review. International Journal of Law & Psychiatry 1989;12:105-15.

Contends that because of their particular legal and psychological characteristics, the needs of mentally ill offenders are ill served and their rights are abrogated. Illustrates this with a review of issues that arise as mentally disordered offenders move from the community through arrest, trial, imprisonment and back into the community in a series of revolutions. Conclusion: there is a schism between the legal position of mentally ill offenders and their needs. The law formally recognises only those mentally ill who are unfit to plead, yet this ignores the vast majority of prisoners with mental illness. Until the extent of the problem is better delineated and creative solutions are found 'it seems that mentally ill offenders will be as much at risk from society as they will be a risk to society'

Hylton JH. Care or control: health or criminal justice options for the long-term seriously mentally ill in a Canadian province. International Journal of Law & Psychiatry 1995;18:45-59.

Debates the underpinning philosophy of provision for the mentally ill in Canadian prisons. Argues for a comprehensive system of mental health care in the community to reduce incarceration of seriously mentally ill in prisons; information and compassion within the justice system to reduce onset of disorders in prison and reduce suicide; creation of alternatives to imprisonment, including access to comprehensive mental health services for mentally ill offenders; and, special support where a person with mental illness is suspected of committing an offence to ensure appropriate diversion from prison where feasible and appropriate.

Kunjukrishnan R,.Bradford JM. Interface between the Criminal Justice System and the Mental Health System in Canada. Psychiatric Journal of the University of Ottawa 1985;10:24-33.

Discusses the relationship between criminality and mental disorder. Reviews research in 3 areas: mental disorder in the criminal population; criminality in the psychiatric population; mental disorder and criminality in the general population and any relationship between them. Conclusion: there is provision within Canadian law for psychiatric support for all those people who come into contact with the criminal justice system and have mental health problems, but the application of such statutes depends upon the knowledge and willingness of those working in both criminal justice and mental health services to act in co-operation. Suggestions are made for improved training, communication, and more individualised assessment, treatment and preparation of each offender.

Wardlaw G. Models for the Custody of Mentally Disordered Offenders. International Journal of Law and Psychiatry 1983;6:159-76

Reviews advantages and disadvantages of potential solutions to the problems presented by mentally disordered offenders in terms of the interests of the offender, the interests of society, and the interests of the administration. Models considered include a centralised psychiatric prison, small psychiatric units attached to prisons, regional forensic psychiatric centres, regional secure units in psychiatric hospitals, and a centralised psychiatric security hospital. Concludes that optimum solution would be an amalgam of prison psychiatric units and regional psychiatric centres.

Wolff, N. 'New' public management of mentally disordered offenders: Part1. A cautionary tale. International Journal of Law and Psychiatry 25 (2002) 15-28.

Analysis of mentally disordered offenders as a 'case study' of systems and services level dysfunction. Multiple agencies involved and multiple needs of individuals are further complicated by the segregated cultures and funding systems of those agencies involved in their support. Examines barriers to integration and current efforts to bridge them including: categorical funding of different agencies devolved locally (creating fragmentation); resource allocation issues like inadequate and inconsistent funding; and, the bureaucratic intransigence of public systems.

Wolff, N. 'New' public management of mentally disordered offenders: Part II. A vision with a promise. International Journal of Law and Psychiatry 25 (2002) 427-444.
Proposes a 'single ownership model' as an alternative integration model, which minimises costs and provides a stable infrastructure to co-ordinate the multiple needs of MDOs in a sensitive and collaborative manner without the rivalry and competition that characterises multiple ownerships. Describes advantages and disadvantages of the holistic approach.

4.6.2 Therapeutic Communities

Cullen, E. Grendon and future therapeutic communities in prison. 1998. London, Prison Reform Trust.

Light R. The special unit - Barlinnie prison. Prison Service Journal 1985;14-7,21
Describes the conception and development of the Barlinnie Special Unit for prisoners who are difficult to manage (serving life sentences often with additional terms for offences committed in jail, with little chance of parole, nothing to lose). Based on a need to stop seeing 'punishment' and 'treatment' as two separate entities with the latter replacing the former, rather, using both rationally and logically. A self-help therapeutic community has emerged, with inmates encouraged to take some responsibility for running own lives and regain feelings of worth and self-respect, taking up more hobbies, having their own personalised space. Keystone is the 'community meeting' which breaks down barriers between staff and inmates, and inmates and their inhibitions, members can make decisions at this meeting (e.g.

taking door off punishment room).

Effectiveness: Aims are to promote social growth and instill respect for persons. This is achieved in low levels of violence on the unit and reduction of tension elsewhere in the prison, high levels of artistic and literary productivity. In 1985, 23 prisoners had been admitted since the unit opened in 1973, 7 were still there, 6 had returned to the main prison, 9 had been released (of these 2 had been recalled) and one had died on the unit. This seems a positive record, particularly given the nature of prisoners.

Smith R. Grendon, the Barlinnie Special Unit, and the Wormwood Scrubs. Annexe: experiments in penology. British Medical Journal 1984; 288:472-5.

One of a series of articles based on research and personal observation, which raise serious concerns about health care in prisons. However, positively appraises the therapeutic regimes available at Grendon Underwood (psychiatric prison for diagnosed psychopaths, Barlinnie Special Unit for prisoners who are hard to manage, and Wormwood Scrubs Annexe for sex offenders and drug addicts. These give prisoners more choice and control, treat them with more respect, and expect them to take responsibility for their own actions. Outcome studies show mixed findings, but these units do demonstrate that integration of health and criminal justice cultures is possible in a humane manner; they provide a way of managing the most challenging prisoners; the prisoners themselves are positive about the therapeutic community regime; violence is reduced; prisoners become involved in a wider range of constructive activities.

Warren F,. Dolan B. Treating the "untreatable": Therapeutic communities for personality disorders. Therapeutic Communities: International Journal for Therapeutic and Supportive Organizations 1996; 17:205-16.

Wexler HK,. Love CT. Therapeutic communities in prison. [Review] [40 refs]. NIDA Research Monograph 1994; 144:181-208

4.6.3 'Review' Papers

Byrne, M and Howells, K. The Psychological Needs of Women Prisoners: Implications for Rehabilitation and Management. Psychiatry and the Law. 2002; 9(1): 34-43

This article reviews the literature on the needs of women offenders. These include psychological, substance use, post-traumatic stress disorder, self-esteem, physical/sexual abuse, and self-injury. They look at the differences in needs between male and female prisoners, and women-specific programmes. They call for appropriate treatment and management of women in prison, and that this should be evidence-based.

Chandler, R.; Peters, R.H.; and Juliano-Bult, D. Challenges in Inplementing Evidence-based Treatment Practices for Co-Occuring Disorders in the Criminal Justice System. Behavioural Sciences and the Law. (2004) 22: 431-448

The presence of adults with co-occurring mental health and substance use disorders has become increasingly evident in the criminal justice system. Interventions and treatment services have been developed and evaluated but adapting these and implementing them in the criminal justice system is challenging. This article reviews research into this area and makes recommendations for further research including the development and testing of interventions for co-occurring disorders which have been adapted for criminal justice settings. This work is vital as neglect of this problem leads to poor outcomes (including re-offending) and augments a rapid cycling of the person between acute psychiatric care and prison.

Eastman NLG. Forensic psychiatric services in Britain: a current review. International Journal of Law and Psychiatry 1993; 16:1-26.

An 'update review' of cultural and organisational problems and potential solutions in the provision of forensic psychiatric servic-

es. Expresses substantiated opinion rather than systematically reviewing literature (no search strategy). For example, the past focus on service development has failed to acknowledge cultural and organisational blocks to change (e.g. conflicting cultures in health and criminal justice system, and role of psychiatrists being confined to 'medical disorders' in people who happen to offend, rather than addressing intrinsic problems leading to offending…), and has led to a neglect of development of therapeutic interventions. Asserts that deinsitutionalisation has inevitably led to increase of mentally ill in prisons; services for specific groups remain inadequate; there is still a tendency to separate 'madness' from badness' and 'kick the ball elsewhere' rather than develop services for people who are mad and bad. Rather than mental health care being dependent on need, the nature of the offence governs access to services and quality of services offered (more serious offenders receive better quality mental health care). Concludes that integrated, high quality forensic psychiatry services linked with serious research will remain elusive until they become more multidisciplinary and multi-agency, and less dominated by medical model. Research must focus less on {largely criminal) outcomes and more on social processes in institutions - particularly closed, secure institutions.

Jemelka R, Trupin E, Chiles JA. The mentally ill in prisons: a review. Hospital & Community Psychiatry 1989;40:481-91.

No search or review strategy. a description of the problems posed by, and faced by mentally disordered offenders in US prisons. Mentally ill offenders are often indistinguishable from other people with mental illness but are further disadvantaged by negative public perceptions forcing rapid 'disposal' – criminal justice system often seen as quicker and more efficient than mental health services; discrimination within prisons - meaning they are less likely to be released and unless crime is serious are unlikely to get into special hospital; on release from prison they are even less likely to find work, housing etc than people who are either offenders, or mentally ill.

Includes definition of MDOs, estimation of prevalence, emerging crisis in US prisons, and ways in which MDOs are treated within prisons (including centralised treatment facility, case management, an emphasis on continuity of care and careful transition back into the community).

Lamb HR, Weinberger LE, Gross BH. Community treatment of severely mentally ill offenders under the jurisdiction of the criminal justice system: a review. New Directions for Mental Health Services 2001;51-65

Draws arbitrarily on the literature to suggests actions at various levels in criminal justice and mental health systems in order for intervention to be effective:

- Steps to prevent inappropriate arrest of mentally ill
- Routine screening for serious mental illness of all arrested persons;
- Correctional institutions and mental health services should work together to provide multi-disciplinary health teams;
- Mentally ill prisoners who have committed minor crimes should be diverted either entirely to mental health services, or at least, for treatment ;
- Court monitored treatment supervision may be required to ensure compliance with treatment.
- Advocacy and case management for released offenders;
- Treatment for violent offenders;
- Availability of highly structured 24 hour care for released mentally ill offenders – provided by mental health services.

Lloyd, Charles. Suicide and self-injury in prison: a literature review. 1990. London: HMSO, 1990.

A review of empirical studies (1979-1990) in the Canada, the US and UK on: completed suicide in prison (n=13); deliberate self-injury (n=6); and, suicide prevention. Search methods not specified. Concludes that a

number of preventive strategies may be useful but have not been statistically evaluated. These include: reducing over-crowding; smaller, more supportive regimes; increased contact with family – or other support from outside prison e.g. Samaritans; reduced isolation, preferably intense supervision, at least cell sharing; inmate watch schemes; electronic monitoring; making cells more suicide proof; improved reception process (allowing thorough assessment of risk); training of prison staff.

Lucas, W. E. Mental health and criminal justice. 1999. Paper presented at the 3rd National Outlook Symposium on Crime in Australia, Mapping the Boundaries of Australia's Criminal Justice System convened by the Australian Institute of Criminology and held in Canberra, 22-23 March 1999

A 'not exhaustive' review of opinion, reviews, editorials and research over previous 6 years. Reflections on the impact of mental illness and incarceration on further crime, mental illness, services and institutions. Covers:

- Health problems in prisons – impact of environment on physical and mental health of all inmates, exacerbated by nature of population incarcerated (predominantly young, male, poorly educated, lived on margins of community. High levels of drug dependency and high proportion from ethnic minority groups), and high incidence of abuse within prisons.
- Mental health of offenders – the less serious the problem is to the system, the less likely it is to receive attention. Older prisoners in particular are rarely treated in prison. Prisoners with personality disorder are unlikely to be treated for co-existing disorders.
- Crime and mental illness – significant proportions of serious offenders had had contact with mental health services but they rarely have diagnosis of schizophrenia and affective disorder, most commonly personality disordered and substance mis-using.
- Trends and problems in treatment and management of MDOs – including recommendations for providing services to specific groups.
- Legislation and related problems.

Mountain, G. Occupational Therapy in Forensic Settings. A preliminary review of the knowledge and research base. College of Occupational Therapists, 1998.

Review of the knowledge base concerning OT in forensic settings including evidence to support clinical practice to demonstrate gaps in knowledge and evidence. Cites four prison-based studies. 1 US commentary of ways in which OT role might be developed in prisons; 2 described OT training programmes in prison; 1 described a prison based OT programme – none of these were specific to prisoners with mental illness. One final study assessed the occupational needs of MDOs in prison.

NHS Centre for Reviews and Dissemination and Policy Research Bureau, London. Scoping review of the literature on the health and care of mentally disordered offenders (CRD Report 16). 16. 1999. York, NHS Centre for Reviews and Dissemination, University of York.

Review of health and care of MDOs aiming to give a broad picture of key issues in the area, and identify the need for further research. Papers selected included reviews and primary research studies in 7 key areas: developments in the field, statutory framework, existing provision for MDOs, casual and preventive studies, pathways in and out of care, and effectiveness research.

Concluded with recommendations for a future research agenda including:

- Improving the academic base through a further set of more focused reviews, a large scale epidemiological survey of the overlap between mental health problems and offending, and longitudinal research on pathways through the system over a number of years.

- Strengthening the evidence base for practice through development and testing of information gathering tools, a needs assessment exercise over provision types, a survey of definitions in use and their operationalisation, descriptions of interagency working arrangements, and costs and outcomes analyses.

Emphasise that the review is not complete; a starting point rather than a conclusion.

Petch E. Mentally disordered offenders: Inter-agency working. Journal of Forensic Psychiatry 1996;7:376-82

Describes current policy for inter-agency working and the role of different agencies and professional groups. Policy guidance includes Home Office circular on interagency working with MDOs (see excluded list, policy documents) and Building Bridges; currently funded research includes NACRO study to produce examples of well integrated services; Health and Social services reports include Health of the Nation and Reed Report, training resources have been developed by NACRO. Role (and relationship to one another) of police, probation, courts, prisons, legal representatives, equal opportunities legislation and homelessness services are described.

Pratt-Travis C. Are private prisons more cost-effective than public prisons? A meta-analysis of evaluation research studies. Crime and Delinquency 1999;45:358-71.

Meta-analysis of 33 cost-effectiveness studies of private and public prisons from 24 independent studies in the US. Reveals no difference between cost of private and public prisons. Strongest predictions of cost include size, age and security level of institution.

Roesch R. Mental health interventions in pre-trial jails. In Davies G, Lloyd-Bostock S, et al., eds. Psychology, law, and criminal justice: International developments in research and practice, pp 520-31. Berlin: Walter De Gruyter, 1995.

Reports on workshops held at International conference in Vancouver to promote collaborative research between delegates. 6 research topics prioritised: prevalence of mental disorder among prisoners; methods/models for detecting mental disorder in prison/jails; forensic assessments performed during jail incarceration; intervention in jails/prisons; diversion/transfer out of jails to mental health facilities; and gradual release programs and community management of mentally disordered offenders.
Conclusion: need for valid and reliable research; need to test generality of existing findings as research often confined to a single system; current research has identified number and needs of mentally ill prisoners, now need to know what prevents revolving door between community, prison and mental health services. Urgent need for more work on relationship between substance abuse and mental disorders.

Roesch R, Ogloff JR, Eaves D. Mental health research in the criminal justice system: The need for common approaches and international perspectives. [Review] [63 refs]. International Journal of Law & Psychiatry 1995; 18:1-14
Briefly reviews (no strategy given) research into 6 topics concerning mental disorder and prisoners on an international basis with following summaries and recommendations for research:

- Prevalence: difficulties comparing different countries (or even systems within countries), possibility that screening tolls do not provide accurate information on specific nature and severity of disorders of mentally ill offenders – more research needed on mental illness and crime.
- Screening: in the absence of screening programmes detection rates appear to be low, but no agreed screening mechanisms. Potential measures include BPRS, RDS, Structured clinical interview for DSM, Global assessment of functioning scale. Tools and procedures need to be researched.

- Forensic assessments – particularly pre-trial to assess competency, fitness to stand trial, criminal responsibility, risk assessment: 80% of defendants referred for assessment are deemed fit, begging questions of how they came to be referred by prison officers. Apart from research into assessment, more research into way the system works is necessary.
- Interventions in prisons: two types of treatment considered here, the first to reduce symptoms of mental illness, the second to reduce criminality and rate of recidivism. Few studies of either. Must also research treatment/pathways within prison generally.
- Diversion schemes: these are based on assumptions that contact with prison is a bad thing, interventions can transform them into stable law abiding community members, and pre-trial diversion is more effective than incarceration. Research is needed in all these areas to test hypotheses.
- Release programmes: release into the community can be overwhelmingly stressful after a long period of rigid, structured and shared life. Positive re-integration to prevent return to either prison or psychiatric services is essential. A number of case management programmes have described successful reintegration into positive and valued social roles.

Sacks, J.Y. Women with Co-Occurring Substance Use and Mental Disorders (COD) in the Criminal Justice System: A Review. Behavioural Sciences and the Law 2004. 22: 449-466

There has been a dramatic rise in the numbers of women entering the criminal justice system and associated with that is the recognition that many women have both mental health and substance use problems. This article reviews the prevalence and range of co-occuring disorders amongst women, and the multiple treatment needs of this group. Abuse and victimisation figure highly in this group, as well as issues related to relationships, children and race. They are also at high risk of health related problems such as HIV, hepatitis and sexually transmitted diseases. Because both mental health and substance use problems carry significant risks of relapse into criminal behaviour effective treatment must be available in the criminal justice system to deal with both. This should include transitional and aftercare/continuing care, which should have a focus on re-integration with their children after a period of incarceration. Prison services should work more closely with outside agencies to ensure a smooth transition from prison to community.

Shaw, J. Prison Healthcare. 2002. Liverpool, National R&D Programme on Forensic Mental Health

Reviews literature on mental healthcare research in prisons. No specified method for reviewing literature, identifies funded research projects, research known to prison ethics committee, projects registered on NRR. Finds little on service delivery and organisation. Cites research into a) models of service delivery (Pettinari and Piper's ESRC funded study of views on models of mental health care in prisons); b) MDTs (Jane Senior, PhD student funded by NHS Exec to explore MDTs in prisons); c) assessment and treatment models (cites Bannerjee et al, 1995) and d) staff training (Morriss et al, Cutler et al, Ramsey et al). Concludes that there is a need for :

- Evaluation of multi-agency working, models of service delivery, multi-disciplinary teams in prisons
- Research into shared information systems
- Evaluation of novel services in prisons.

4.6.4 Evaluation of Services

Anderson JB,.Parrot J. Urgent psychiatric transfers from a prison in England and Wales; A prison perspective. Criminal Behaviour and Mental Health 1995;5:34-40.
A retrospective study of all emergency transfers from Belmarsh prison to general psychiatric care between April 1991 and March

1992. National rates varied during this time with Belmarsh transferring significantly more than other prisons, this may be due to local differences in: use of MHA, psychiatric services, availability of RSU beds. However, all Belmarsh referrals were accepted by psychiatric services, 14 went to locked wards, 5 to RSUs, 3 to maximum security hospitals. Average length of stay under conditions of transfer was 3.7 months. Reasons for urgent transfer included serious disturbance, serious suicide risk, self-starvation, and organic psychosis. 80% of urgent transfers were African Caribbean – a higher proportion than found in prison population as a whole. Conclusion: MHA provision for urgent transfer (S48) is useful; the majority of such referrals can be accommodated within general psychiatric services.

Banerjee S, Oneillbyrne K, Exworthy T, Parrott J. The Belmarsh Scheme - A Prospective-Study of the Transfer of Mentally Disordered Remand Prisoners from Prison to Psychiatric Units. British Journal of Psychiatry 1995;166:802-5.

Prospective study of a 6-month cohort of remand prisoners requiring transfer to hospital. Low threshold set for psychiatric assessment in Prison healthcare centre, full psychiatric assessment on next working day by general and forensic consultant supervisors and prison-based psychiatrists. 53 of 1229 (4.3%) new remands were transferred to psychiatric units (42 schizophrenia, 5 mania, 2 depression, 2 learning difficulties, 1 schizo-affective disorder and 1 adjustment disorder). 21 (40% were admitted to open wards, 18 (34%) to locked wards, 11 (21%) to RSUs, 1 to a special hospital and 1 to a learning disability unit. Although 41 (77%) had been in contact with psychiatric inpatients, only 18 (34%) were in contact with mental health services at the time of arrest. Significantly more black men were transferred to psychiatric services than any other remand group. For the transfer group, offences included violence against the person (17), sexual (4), acquisitive (9) drugs, and they were significantly more likely than other remands to have their type of offence classified as 'other' (including criminal damage and threatening behaviour). Effectiveness: Aimed to identify all those who require transfer, ensure that they are accepted for treatment and effect transfer as soon as possible: All those referred for psychiatric treatment or admission were accepted by psychiatric services. This is an improvement on other services where remand prisoners have been refused admission to psychiatric services (Coid, 1988 found that 20% MDOs remanded to Winchester prison were rejected for treatment by psychiatrists, Robertson et al (1994) found that 29% psychotic men referred for treatment from Brixton prison were rejected). Further aim that remand period should not be extended as a result of mental health problems: times that the transfer group spent on remand was significantly lower than that reported at Brixton (James and Hamilton, 1991; Joseph and Potter, 1993).

Brooker C., Ricketts T, Lemme F, Dent-Brown K, and Hibbert C, An Evaluation of the Prison In-Reach Collaborative, 2005, Final Report to the Department of Health, available at http://www.nfmhp.org.uk/MRD%2012%2046%20Final%20Report.pdf

Cox JF, McCarty DW, Landsberg G, Paravati MP. A model for crisis intervention services within local jails. International Journal of Law and Psychiatry 1988;11:391-407.

Cox JF, Landsberg G, Paravati MP. The essential components of a crisis intervention program for local jails: The New York Local Forensic Suicide Prevention Crisis Service Model. Psychiatric-Quarterly 1989; 60:103-17.

Both above papers referred to same program. New York State-wide advisory committee designed inter-agency program to identify and manage suicidal and seriously mentally ill in mates in local jails and police lockups based on explicit lines of accountability and responsibility, inter-agency working and integrated systems of support. Four major components of programme included:

policy guidelines, screening guidelines, eight hour training programme for all officers, and a mental health practitioners' manual. Essential requirements for the model include: inter-agency conceptual agreement about who will be served, the goals of the program, and the expected consequences for the target population.
Effectiveness: 33% drop in suicide rates during implementation year (from 1.7 to 0.8 per 1,000) despite 14% increase in jail admissions.

Craig TJ, McCoy EC, Stober WC. Mental health programs in three county jails. Journal of Prison and Jail Health 1988; 7:15-26.

Description of mental health programs running in three County jails in North New Jersey. Set up following inquiry into 2 suicides finding high levels of mental illness in jails and very high stress levels overall. Multi-disciplinary team from psychiatric hospital and CMHT visited jails weekly to: assess urgent cases, prescribe treatment and counselling, advise prison staff, arrange transfers, make recommendations in court, plan discharge support. Effectiveness: 50% reduction in inmates sent to psychiatric services for assessment (leading to cost reductions), impressions of less disturbed behaviour, fewer restraints, less property damage and less stressful working environment. Mental health workers preferred providing in-reach services.

Elger BS, Goehring C, Revaz SA and Morabia A, (2002) Prescription of hypnotics and tranquilisers at the Geneva prison's outpatient service in comparison to an urban outpatient medial service, Sozial- und Präventivmedizin/ Social and Preventive Medicine, Vol. 47(1): 39-43

Comparison of prescription of hypnotics and sedatives for males aged less than 39 years in a prison setting with those in a Medical Policlinic (University Hospital) setting. Shows that the rate of prescription of various types of drugs was higher in the prison setting, even when comparison was restricted to patients who were not defined as drug addicts. Suggests that the difference in levels and types of drugs being prescribed between settings may be due to factors associated with becoming a prisoner e.g. anxiety/sleep problems.

Meloy JR. Inpatient Psychiatric-Treatment in A County Jail. Journal of Psychiatry & Law 1985; 13:377-96

Describes the development of inpatient psychiatric services within San Diego County Jail with a focus on support provided and patient characteristics. Discusses the potential inter-personal problems between prison staff and mental health professionals, and the difficulties of safeguarding the legal rights of patients detained under both civil law and mental health law.

Meltzner, J.L., Fryer, G.E., Usery, D. (1990) Prison mental health services: Results of a national survey of standards, resources, administrative structure and litigation. Journal of Forensic Sciences, 35, 2, 433-438.

Mental health services within prisons have been accelerated in the US as a result of successful legal action. This survey of all state correctional departments sought to identify factors correlated with successful legal action concerning mental health issues. 21 states were involved in such litigation. Only correlates with legal action were: presence of psychiatric hospitals operated by Department of Corrections (and with questionable mental health expertise) and prison system with more than 15,000 inmates.

Rapaport J. Prisoners of the Care Programme Approach. Care Plan 1998; 4:19-24.

Describes the development of a programme to link 6 NHS Health Trusts and mentally disordered offenders in High Down Prison in Surrey through the CPA. Included a census of all people with mental health problems and an offending history in Surrey, devising and implementing a multi-agency training programme, and developing a CPA

protocol between the prison and healthcare providers (covering: aims, prison reception, remand prisoners, during prison sentence, prison to prison transfer, prison to hospital transfer, release from prison). Effectiveness: Increase in liaison between prison and Trust areas, better tracking, information and care planning for mentally disordered prisoners with an option to hold CPA meetings. However, meetings have been difficult to arrange therefore a new nurse post has been created to operate the scheme.

Vaughan, P., Kelly, M., Pullen, N. Psychiatric support to mentally disordered offenders within the prison system, Probation Journal, 1999 Vol. 46, No. 2: 106-112

Survey of numbers and needs of MDOs in Wessex Consortium area prisons. 16 prison healthcare centres exist in area, 10 have beds (not reserved for mental health care), 2 have in-house psychiatrists, 3 provide facilities for nearby prisons to use. 67 MDOs identified in the area but only 21 met Consortium's criteria as MDO, 15 of these were deemed to require care in an NHS facility. Authors conclude that there is a severe shortage of both services and trained staff available for MDOs in prison.

Young DS, Co-occurring disorders among jail inmates: Bridging the treatment gap, Journal of Social Work Practice in the Addictions, 2003 Vol.3(3): 63-85

Weaver T, Taylor F, Cunningham B. The Bentham Unit: a pilot remand and assessment service for male mentally disordered remand prisoners. British Journal of Psychiatry 1997; 170:462-6.

A retrospective before and after study of the pattern and speed of assessment and transfer of patients referred for NHS assessment before and after the Bentham Unit opened. (Bentham Unit set up in 1994 to identify male prisoners with serious mental illness in the former NW Thames RHA, to provide rapid assessment and transfer to appropriate NHS care). Number of referrals and transfers to hospital increased significantly between two periods, speed of assessment and transfer increased significantly. Results compared favourably with those reported in prisons where there is no outreach service (eg Brixton, Robertson et al, 1994). Conclusions: Remand bed units need to incorporate a mental health assessment outreach service. Bentham Unit is regional rather than the local solution proposed in Reed Report (1992), but this leads to economies of size: local units targeted at remand population may not be feasible. In the long term, it may be desirable for follow-up by local services through CPA, care management and community supervision, but Bentham unit set up as a result of the difficulties that local services experienced fulfilling this role.

Weaver T, Taylor F, Cunningham B, Kavanagh S, Maden A. Impact of a dedicated service for male mentally disordered remand prisioners in north west London: retrospective study. British Medical Journal 1997; 314:1244-5.

Study of prisoners referred for NHS psychiatric assessment within NWTRHA before and after dedicated service for mentally disordered remand prisoners. Impact on intervals between remand, assessment and transfer was compared before and after the Bentham Unit was set up to provide rapid assessment and transfer to appropriate psychiatric care. Found large and significant reductions in intervals between remand and first assessment by NHS psychiatrist, and between remand and transfer following opening of Bentham Unit.

4.6.5 Audit

Meltzner, J.L., Fryer, G.E., Usery, D. (1990) Prison mental health services: Results of a national survey of standards, resources, administrative structure and litigation. Journal of Forensic Sciences, 35, 2, 433-438.

Mental health services within prisons have been accelerated in the US as a result of successful legal action. This survey of all state

correctional departments sought to identify factors correlated with successful legal action concerning mental health issues. 21 states were involved in such litigation. Only correlates with legal action were: presence of psychiatric hospitals operated by Department of Corrections (and with questionable mental health expertise) and prison system with more than 15,000 inmates.

Reed JL,.Lyne M. Inpatient care of mentally ill people in prison : results of a years programme of semi-structured inspections. British Medical Journal, 2000; 320:1031-4

Audit of prison mental health care systems against published guidelines. 13 prisons with inpatients facilities were visited by team of experts and compared with nine healthcare standards approved by the Prisons Board for implementation by 1997, covering assessment, service provision, transfer and discharge, mental health promotion, provision for HIV and AIDS, use of medicines and services for substance misusers.

Findings: no doctors in charge of inpatients had psychiatric training, only 24% of nurses had mental health training; patients were locked up for between 13 and 20 hours per day, where seclusion was used, average length was 50 hours. Services for mentally ill in prisons fell far below standards in NHS, patients lives were restricted and access to therapy limited strengthening case for mentally ill prisoners to be treated in NHS.

Robbins, D. Mentally Disordered Offenders; Improving Services (1996) Social Services Inspectorate, Department of Health.

Review of progress in 7 English Local Authorities towards key targets of Reed Review (i.e. quality of care, community rather than institutional, in least secure setting appropriate, maximising rehabilitation, near their families and homes). Interviews, observations and documentary analysis undertaken by a team of inspectors. Findings included:

i) A need for standards against which services can be measured, and standards for collection and sharing of information,
ii) Much work going on: one strategy developed and finalised, others in process but this required appropriate representation form all stakeholders;
iii) Structures for implementing a strategy were being developed - but often in an ad hoc manner;
iv) Joint working was going on every authority and there was recognition of weaker areas and potentially vulnerable groups of MDOs;
v) Joint commissioning plans were being developed, but hampered by lack of core data;
vi) Joint working patchy, but where it existed had improved collaboration on assessment and care management;
vii) 4 areas of concern in all areas included: provision of support for 'diverted' offenders, the use of ASWs as 'appropriate adults, provision of accommodation with 24 hour support, and the importance of outreach to prevent drop-out between services.

Although training was a stated priority, available training materials not being used.

Vaughan, P., Kelly, M., Pullen, N. Psychiatric support to mentally disordered offenders within the prison system, Probation Journal, 1999 Vol. 46, No. 2: 106-112

Survey of numbers and needs of MDOs in Wessex Consortium area prisons. 16 prison healthcare centres exist in area, 10 have beds (not reserved for mental health care), 2 have in-house psychiatrists, 3 provide facilities for nearby prisons to use. , 67 MDOs identified in the area but only 21 met Consortium's criteria as MDO, 15 of these were deemed to require care in an NHS facility. Authors conclude that there is a severe shortage of both services and trained staff available for MDOs in prison.

4.6.6 Pathways Research

Peters, R.H.; LeVasseur, M.E. and Chandler, R.K. Correctional Treatment for Co-Occurring Disorders: Results of a National Survey. Behavioural Sciences and the Law, 2004. 22:563-584

This paper reports on the findings of a comprehensive national survey of co-occurring disorder treatment in correctional settings in the USA. A total of 20 programmes across 13 state correctional facilities were identified and surveyed. Many of these treatment services were modelled on an adapted therapeutic community. There was significant diversity in duration of programme (3-24 months) and in the clinical modifications to the programmes. The key characteristics of the services was screening and referral, assessment, drug testing, crisis management, clinical interventions (group and individual therapy, peer support groups such as AA and NA, relapse prevention) as well as some providing psychoeduactional groups on anger management, HIV and Hepatitis C. It was recognised that gaps in the services were around the transition from prison to community. Most of the services were in the process of developing procedures to assist with this and about half had something in place. The implications from the survey suggested that these specific services led to enhanced collaboration with the wider prison health service and community services

Poporino, F. and Motiuk, L. (1995) The prison careers of mentally disordered offenders. International Journal of Law and Psychiatry, 18, 29-44

Compared 36 prisoners with psychosis with 36 non-disordered offenders in a similar situation. Mentally ill inmates were less likely to get early release on full parole, and when released, were more likely to have their supervision revoked despite the fact that offenders in the non-disordered group were more likely to commit a new offence.

Pyszora, N.M and Telfer, J Implementation of the Care Programme Approach in Prison, Psychiatric Bulletin, 2003, 27:173-176

This study sought to retrospectively identify the number of prisoners at a high security prison in London (Belmarsh)who would fall into inclusion criteria for enhanced CPA. It is estimated that Belmarsh sees 4000-5500 new prisoners each year. The survey screened inmate medical health records over the past 12 months, and found 91 prisoners who would qualify for enhanced CPA. By far the most common diagnosis was schizophrenia (77%). 80% had been known to psychiatric services before prison, and 44% had a history of alcohol problems and 74% had a history of drug misuse problems. There wasn't accurate figures for sentenced and remand prisoners in Belmarsh, but based on prevalence studies the rates of people with serious mental illness in prison is between 2.5- 7%, this would double the 91 identified in this study. The paper discusses the implementation of CPA in prison with the difficulties of keeping track of individuals as they move about the system. In addition, the effective implementation of CPA is likely to pose substantial resource issues for both the mental health team working inside the prison and for local psychiatric services who should be picking these people up and working with them once released.

Shelton D, (2005) Patterns of Treatment Services and Costs for Young Offenders with Mental Disorders, Journal of Child and Adolescent Psychiatric Nursing, Vol.18(3): 103-112

This paper examines patterns of treatment services and costs for young mentally disordered offenders in the US. It shows that a relatively large proportion of youths diagnosed with a mental health disorder do not receive treatment for it whilst in the juvenile justice system. The types of treatment that youths were most likely to receive are family therapy, group therapy, individual therapy and medication. The latter was only given to 0.09% of the sample. The paper highlights a racial bias in who treatment is provided to. African Americans constituted 63.1% of individuals meeting the diagnostic criteria for a mental health disorder, but only 11.9% of

those receiving treatment, whilst Caucasians constituted 24.4% of individuals diagnosed with a mental health disorder, but 42.6% of these individuals received treatment.

Smith SS, Baxter VJ, Humphreys MS, (2003), Psychiatric Treatment in Prison: A missed opportunity? Medical Sci Law, Vol.43 (2): 122-126

This paper examined the existing contact that prisoners had with community mental health services, and found that most had been in contact with psychiatric services at the time of detention, but very few received contact whilst in prison. 93% thought that they would need psychiatric support on release. The authors advocate a greater liaison between prison and community mental health services especially in facilitating aftercare plans on release.

4.6.7 Organisational Research

Fowler, V.; Mulliner, K.; and Betts, N Prison Mental Health Transfers. An Audit Report. Department of Health Care Services Improvement Programme 2005.

There is a lack of empirical evidence about the number of people awaiting transfer from prison to suitable secure hospital setting under section 47/48 of Mental Health Act. This report presents the findings of a survey of 119 prisons regarding prisoners awaiting transfer. They found that 282 prisoners were awaiting initial psychiatric assessment from in-house psychiatric services, and 46% were assessed within one week. Only 18% reported transfer to hospital after initial assessment. 120 prisoners were awaiting second assessment by external psychiatrist, and the wait was longer if in a male local or London prison. 28% waiting over 4 weeks, 9% over 12 weeks and 4% waiting over 6 months. Availability of specialist beds was cited as one of the reasons for delay in transfer. There was a high number of those not accepted for transfer and reasons for this included clinical profile not suitable for transfer, and personality disorder not deemed treatable. Only 11 prisons have emergency out of hours psychiatric service. Only 7% of prisoners returning from hospital had a section 117 plan.

Morrissey JP, Steadman HJ, Kilburn H, Lindsey ML. The Effectiveness of Jail Mental-Health-Programs - An Interorganisational Assessment. Criminal Justice and Behavior 1984; 11:235-56.

Presents an inter-organisational approach to the assessment of jail mental health programs (this recognises the external interdependency of prison mental health systems), conceptual model consists of two parts: structural antecedents of interagency conflict, and the impact of conflict and these structural variables on the perceived effectiveness of jail mental health programmes. Data were collected in semi-structured interviews with key personnel in 33 jails to find out about structural data such as location, size, function and mental health services); this was followed with survey instrument to measure effectiveness of the jail mental health program (in terms of safety and service) and conflict between different agencies. Findings (selection of sites and small numbers limit generalisability) suggest that there is no single model that provides the best mental health services, but there are trade-offs associated with each inter-organisational arrangement. For example, mental health services outside the jail reduce inter-agency conflict but reduce safety, whilst an inside programme improves safety but has higher inter-agency conflict. Recommends further inter-organisational research to look at content of services delivered, not just structure, and further research that considers the political, societal and human service context of MDO service provision.

Morrissey JP, Steadman HJ, Kilburn HC. Organisational issues in the delivery of jail mental health services. Research in Community and Mental Health 1983; 3:291-317.

Presents US national data from 32 self-selected communities demonstrating how inter-organisational dimensions relate to the perceived effectiveness of jail mental health services. Uses Newman and Price's (1977)

typology of organisational arrangements for service delivery into jails: internal system (jail provides all own services), inter-section system (external human service organisations work co-operatively with the jail), linkage system (one outside human service agency had direct contact with the jail and brokers services for them), combination system (a mixture of above types). Qualitative interviews with key staff were augmented by a questionnaire regarding effectiveness of jail mental health program, extent of inter-agency co-ordination and conflict. 323 forms returned - response rate of 68% (36% jail employees, 64% affiliated mental health agencies). Results revealed trade-offs between effectiveness, conflict and co-ordination. For example, internal organisations rated highly on effectiveness and safety but had greater inter-agency conflict; inter-section systems were less effective but had less conflict. Local jails were generally safer but liaison with external agencies was limited making long-term goals difficult to secure.

4.6.8 Needs Assessment

Cohen A, Eastman N. Needs assessment for mentally disordered offenders: measurement of 'ability to benefit' and outcome. [Review] [24 refs]. British Journal of Psychiatry, 2000; 177:493-8.

Review of government policy regarding MDOs' needs assessment and problems of conducting needs assessment on MDOs. Provide five categories of needs assessment methods with a critical assessment of each in relation to MDOs. All are theoretically and methodologically different, suitable for different populations and different purposes. Includes:

- Survey approach including measurement of needs in terms of ability to benefit from a service, this may be based on population figures for each disease category, but there is little evidence to on MDOs ability to benefit in terms other than recidivism; measurement of prevalence and incidence (likely to give imprecise information on MDOs because of complexity of problems); mental health needs of prisoners in various groups; and/or population based.
- Rates under treatment approach – uses current service use within a given population to estimate demand and needs. Confounded by problems interpreting service provision with service use and need (what about unmet needs?), and lack of adequate information systems or categories of data on existing information systems.
- Social indicator approach uses existing social data (e.g. census, deprivation indices) to make estimates of need in a given community. Indicators may be selected on theoretical basis, prior research or preliminary investigation of a population. Not yet applied to MDOs (but Coid developing a model in UK).
- Key informant approach – information obtained by interviews with key informants/experts. Has been used to determine purchasing priorities.
- Community Forum Approach – community members asked to assess needs of those within the community (not yet applied to MDOs).

Cohen A,. Eastman N. Needs assessment for mentally disordered offenders and others requiring similar services. Theoretical issues and methodological framework. British Journal of Psychiatry, 1997; 171:412-6.

Reviews literature (no search strategy) on definition and measurement of outcome in relation to MDOs Presents general principles of outcome measurement as a 'framework' and analyses the problems of conducting outcome research including: heterogeneity of MDOs and the complexity of their needs – some resulting from mental health problem, others related to offending (these may or may not be related), therefore outcome measurement must cover wide range of domains. Concludes that outcome must be placed within a broader evaluative framework of service evaluation to include 'input', 'process' and 'outcome' indicators

which related to programme/policy objectives. Presents a 'comprehensive conceptual framework for the measurement of outcome, quality and service evaluation for MDOs'.

Patrick HE, Picken J, Lewins P, Cummings I, Parrott J. Improving health services for prisoners : A health needs assessment of Her Majesty's Prison Belmarsh. Public Health Medicine 2000; 2:130-4

Describes process of assessing the health needs of HMP Belmarsh inmates (1999-2000). Project team made following priorities for improvements in services using the Prison Health Needs Assessment Toolkit (see excluded papers). Team identified a number of priority areas for improvement: information systems, staffing profile, need for a PCT and practice manager post, need for a CMHT in the prison, improvement of physical environment, development and implementation of protocols, prisoner empowerment to manage own health. Action plan has now been agreed.

4.6.9 Screening for Mental Health Problems

Anthony, D and McFadyen, J. Mental Health Needs Assessment of Prisoners. Clinical Effectiveness in Nursing 2005. 9: 26-36
This paper reports on the development of a prison specific needs assessment tool: the Prison Mental Health Inventory. The tool was developed and piloted and was found to be acceptable by both prisoners and prison staff. It had high internal reliability as well as face, content and convergent validity. Factor analysis revealed two dimensions: substance abuse and other mental health symptoms. The authors acknowledge limitations of the tool (such as length of time to complete) and discuss the dilemma of a quick needs assessment versus a tool that may take longer to complete, but may yield more accurate information.

Birmingham L, Gray J, Mason D, Grubin D. Mental illness at reception into prison. Criminal Behaviour and Mental Health 2000; 10:77-87.

Evaluation of screening process at Durham prison on 546 consecutive remand prisoners. Findings of routine screening was compared with research screening, also comparison through observation and assessment of environment, healthcare staff were interviewed and prisoners' views on screening were identified. Findings: routine screening compromised by unsatisfactory environment and inadequate communication skills of prison healthcare staff, records were missing or incomplete in 10% of cases. Four variables were identified that were best predictors of mental illness and routine assessment included questions in these areas. Subsequent mental health assessment by doctors added little information. Conclusions - screening needs revision. Recommend preliminary screen by trained prison health worker, prison doctors to focus only on those who screen positive initially.

Birmingham, L; Mullee, M Development and Evaluation of a Screening Tool for Identifying Prisoners with Severe Mental Illness, Psychiatric Bulletin, 2005. 29: 334-338

The paper describes the development and evaluation of a screening tool for mental health problems based on behavioural observations of people by prison officers. The items were obtained from information gathered from interviewing prison officers and prisoners. They chose the 5 most commonly observed behaviours which are most consistently associated with signs of serious mental illness. The tool was written in the terminology of the prison officers. A 6th item was included for prison officers to add any extra but important observations not covered by the first 5. The tool was tested by prison officers with a group of prisoners with identified mental health problems (case group) and a comparison group without mental health problems. Most of the prisoners in the case group met at least 2 of the 5 criteria. 38% has a severe mental illness compared with none of the comparison group. This tool shows promise as a simple and quick screening tool for prison officers to use to identify someone who may

be experiencing mental health problems. requires further research to determine if it is effective in other male prisons

Black, D.W; Arndt, S.; Hale, N.; and Rogerson, R Use of the Mini Neuropsychiatric Interview as a Screening Tool in Prisons: Results of a Preliminary Study, Journal of the American Academy of Psychiatry and the Law, 2004, 32: 158-62

This paper reports on a pilot study of the use of the MINI to assess a random sample of prisoners. Correctional staff received training in the use of the MINI and then administered it to 67 prisoners. It yielded more referrals than would have been generated by the routine screening methods; however it was more time consuming to administer, taking an average of 41 minutes to administer. There was also the issue of whether use of the MINI could lead to over identification (false positives), which in turn might lead to an increase in inappropriate referrals to mental health services. They call for further exploration of the use of the MINI in correctional settings before it is adopted as routine screening tool.

Boothby JL,.Durham TW. Screening for depression in prisoners using the Beck Depression Inventory. Criminal Justice and Behavior, 1999; 26:107-24.

Describes use of Becks Depression Inventory (BDI) during prison admission process and establish utility of BDI as a screening measure for depression among prisoners. Advantage of taking 5-10 minutes to administer, disadvantage of being a transparent instrument on which it is simple to 'fake good or bad'. BDI administered to 1,494 consecutive admissions to N. Carolina state prison. Scores differed by sex, age, custody status, recidivism and race. Factor analysis yielded four distinct interpretable factors labelled cognitive symptoms, vegetative symptoms, emotional symptoms, and feelings of punishment - all of which may suggest different responses to incarceration. The BDI may not, therefore be measuring depression (e.g. punishment is a reality). Further testing is needed, and possible amendment before it is used as a screening tool for prisoners.

DiCataldo F, Greer A, Profit WE. Screening prison inmates for mental disorder: An examination of the relationship between mental disorder and prison adjustment. Bulletin of the American Academy of Psychiatry and the Law, 1995;23:573-85.

Describes use of a modified version of the 'Referral Decision Scale' (developed from the diagnostic interview schedule). Authors suggest that survey results suggest this may be an effective screening mechanism for 'correctional settings'. Focus of this assessment is extent to which adjusted cut off scores generate a manageable referral rate, rather than accuracy of identification of prisoners with mental health problems.

Earthrowl, M and McCully, R. Screening new inmates in a female prison, Journal of Forensic Psychiatry, 2002 13:428-439

This paper reports on the field testing of two screening tools for female prisoners for major mental illness and risk of self-harm/ suicide: the Referral Decision Scale and the Suicide Checklist. These were administered to 150 prisoners over 1 year. The outcomes indicated high levels of psychiatric morbidity. The tools were sufficiently sensitive with acceptable numbers of false positives. In addition they were quick and easy to administer. The authors suggest that the screening tools picked up twice as many inmates with mental health problems compared with usual methods.

Gallagher RW., Ben-Porath YS., Briggs S. (1997) Inmate views about the purpose and use of the MMPI-2 at the time of correctional intake. Crim Just Behav 1997; 2:360-369

Follow-up of inmates' views about completing MMPI-2. Found responses were distorted by proportion of inmates who completed it: some admitted to answering untruthful-

ly. Also MMPI-2 may not transfer easily to prison settings as several items which count as psychotic on the MMPI are reality based for prison population (e.g. being plotted against).

Gavin, N.; Parsons, S.; and Grubin, D Reception Screening and mental health needs assessments, Psychiatric Bulletin, 2003, 27:251-253

This study aimed to clarify the nature and extent of psychiatric provision as a result of the implementation of a new screening protocol. 201 male prisoners (32.6%) screened positive for serious mental illness. Over a 15 week period, 16 new prisoners would need an urgent psychiatric review and 59 would need psychiatric nurse follow-up. Half of those who screened positive also had dual diagnosis (co-occurring substance misuse problems). Large demands will be placed on psychiatric services with the introduction of the new screening system.

Grubin D, Parson S, Hopkins C, Report on the evaluation of a new reception health questionnaire and associated training. Unpublished Report from University of Newcastle, 1999.

Evaluation of the Prison Service Health Care Directorate revised screening instrument for use by Health Care Officers. Field trials held in 6 remand prisons. Gives informative background to development of screening instrument and the need for sensitivity rather than specificity. Findings: health screen identified 86% serious mental illness (compared with 25-33% in previous studies) but follow-up action was not always instigated. Detection of those withdrawing from drugs and alcohol was also good, and training did cover issues of prisoners who were afraid of disclosing or who over-disclosed (in order to obtain medications). Screen asks about self-harm and suicide risk but it is not clear whether all those at risk are identified.

Grubin, D, Parsons S, Walker L, Garrett L, Ebie E, Mtanabari S, Healicon J. Mental health screening in female remand prisons. Report for the National Programme on Forensic Mental Health R&D. 2000

Uses Reception health screening scale in two female remand prisons to evaluate routine screening process/instruments, and assess level of mental illness among female remand prisoners. Finds routine screening detects less than one third of women with mental health problems. Identified 2 variables that detect 80% of mental illness in women. Recommend different screening for female and male prisoners, routine screening (including key questions) for all prisoners, with all those responding positively to two questions having further assessment by trained mental health worker.

McClearen, A.M; Ryba, N.L Identifying Severely Mentally Ill Inmates: Can Small Jails Comply with Detection Standards, Journal of Offender Rehabilitation, 2003 37:25-40

This study compares detection rates with the Referral Decision Scale-RDS (a short officer administered booking questionnaire). It had a high rate of false positives but correctly identified more mentally ill inmates than booking procedure. They suggest that combining booking procedure with the use of the RDS may produce a more comprehensive procedure which is manageable for small jails and compliant with standards for inmate care.

Mills, J.F.; Kroner, D.G. Screening for Suicide Risk factors for prison inmates: Evaluating the efficiency of the Depression, Hopelessness and Suicide Screening Form (DHS), Legal and Criminological Psychology, Volume 10, Number 1, February 2005: 1-12(12)

They compare the DHS with interview based and file review information. They found that the DHS was reasonably efficient when compared to other methods of gathering suicide risk factors. The predictive accuracy of identifying inmates experiencing psychological distress was confirmed. The study showed that any one method of information was not sufficient in identifying inmates at

high risk of suicide, and that any two methods greatly increased identification.

Morris SM., Steadman HJ., Veysey BM. (1997) Mental health services in US jails: a survey of innovative practices. Crim Just Behav, 24:3-19

Found that a multi-tiered evaluation procedure was most effective with initial screening by a booking officer followed by a mental health screening by a member of mental health professional and where any evidence of mental health problems, a full evaluation by a trained mental health professional. Cost-effective, and successful in identifying large proportion of inmates needing mental health treatment.

Nicholls, T.L.; Lee, Z.; Corrado, R.R.; and Ogloff, J.R.P. Women Inmates' mental health needs: Evidence of the Validity of the Jail Screening Assesment Tool (JSAT) 2004, International Journal of Forensic Mental Health 3: 167-184

This paper reports on two studies (based in Canadian womens' prisons). The first was a prevalence study of mental health needs based on the use of the JSAT and the BPRS-Expanded, and the second study related to the validity of referrals to mental health services based on a 20 minute semi-structured JSAT compared with independent evaluation using the SCID (DSMIV) non-patient edition. Both studies indicated a high level of schizophrenia and other serious mental illness among female inmates. The JSAT was a potentially effective tool for the identification of women prisoners who need mental health services and specialised placements.

Retzlaff, P.; Stoner, J.; and Kleinsasser, D. The Use of the MCMI-III in the Screening and Triage of Offenders. International Journal of Offender Therapy and Comparative Criminology, 2002 4: 319-332

The Millan Clinical Multi-Axial Inventory (MCMI) is designed to assess personality disorder. This was administered to 10,000 inmates in Colorado, USA, and the scores were compared to intake judgement and outcome variables across mental health, substance use, and violence domains over 20 months. The MCMI performed well in correctional settings- elucidating key psychopathology. It correlated well with expert opinion and predicted future behaviour and outcomes. It was best at predicting mental health variables and more limited in prediction of substance use and violence variables. The authors recommend its use as an adjunct to individualised assessment such as clinical interview and it could be used as part of a serial triage procedure.

Roesch R. Mental health interventions in pre-trial jails. In Davies G, Lloyd-Bostock S, et al., eds. Psychology, law, and criminal justice: International developments in research and practice, pp 520-31. Berlin: Walter De Gruyter, 1995

Describes screening process aimed at breaking the cycle of incarceration and release of mentally disordered offenders. All persons entering Surrey (British Columbia) pretrial (remand) jail are given mental health assessment including BPRS, GAFS, and semi-structured interview to identify mental health history, orientation, social adjustment and criminal history. All inmates considered to be at risk of mental illness are referred to forensic nurse where more detailed screening occurs and if necessary they are then referred for specialist mental health services. On discharge, mental health services are involved if necessary. Conclusions: Problems occur in co-operative working between CJS and health service, gap needs to be bridged by key personnel, and correctional staff need routine training in mental health problems.

Teplin L, Scwartz J, Screening for severe mental disorder in jails: the development of the referral decision scale. 1989. Law and Human Behaviour, 13:1-17

Describes development of Referral Decision Scale. This is successful at picking up people with serious mental illness (sensitivity 79%) with fewer false positives (specificity

99%) but 14 questions focus exclusively on psychotic disorders. It does not screen for physical illness, alcohol and drug withdrawal, or risk of self-harm).

Wang EW., Rogers R., Giles CL, Diamond PM., Herrington-Wang LE., Taylor ER. (1997) A pilot study of the personality assessment inventory (PAI) in corrections: assessment of malingering, suicide risk and aggression of male inmates. Behav Sci Law; 15: 469-482

Personality Assessment Inventory found to be particularly useful in identifying suicidal prisoners, and in distinguishing between 'malingering' and aggression'

4.6.10 Studies of Specific Groups

Gorsuch, N. Unmet need among disturbed female offenders. Journal of Forensic Psychiatry, 9, 3, 1998

Case note study of 44 women on psychiatric wing at HMP Holloway. All had been referred to NHS psychiatric services. Half the women were refused a bed at least once (n=22, 'difficult to place') the other half obtained beds without difficulty (n=22, 'comparison group). These groups were compared on a range of socio-demographic and psychiatric variables. The groups differed significantly in the following ways: more of the comparison group had held skilled jobs; more of the difficult to place group were categorised as dangerous/violent and had more serious offences. Both groups had 'disturbed' personal histories but the difficult to place women were more likely to report suffering some kind of abuse and far more of this group had a history of self-harm. Most women in both groups (93%) had past contact with psychiatric services and all but one in the difficult to place group had diagnoses that included personality disorder. The authors conclude that these women were 'difficult to place' as a result of inadequate service provision and poor perceived treatability. This raises the need for alternative provision for these women, and more research into therapeutic interventions that may be effective.

Kurtz Z, Thornes R, Bailey S. Children in the criminal justice and secure care systems: how their mental health needs are met. Journal of Adolescence 1998; 21:543-53.

Survey of the perceptions of relevant service providers about the mental health needs of young people considered for secure placement. Agreed by Departments of child and adolescent psychiatry, and forensic psychiatry, social services, youth justice, probation, secure units and young offender institutions that highly disturbed young people are not adequately served. Their needs are neither well recognised, understood nor met. Available expertise and resources are patchy and limited.

Mayer C. HIV-infected prisoners: What mental health services are constitutionally mandated? Journal of Psychiatry and Law 1995; 23:517-53.

The incidence of AIDS is 14 times higher in state and federal prisons in the US than in the general population. This paper reviews the constitutional rights of US prisoners with AIDS for mental health care, and lists their special mental health needs such as depression, anxiety, adjustment disorder, panic disorders, delirium and dementia. Interventions and treatments are briefly reviewed with recommendations for appropriate screening, monitoring and off-site specialised psychiatric care.

NHS Centre for Reviews and Dissemination and School for Policy Studies, Bristol University. Women and secure psychiatric services: a literature review (CRD Report No. 14). 1999. York, NHS Centre for Reviews and Dissemination, University of York.

Cochrane review addressing three questions: service models for providing psychiatric care in secure settings; information about populations of women deemed to need psychiatric care in secure settings; evidence of effectiveness of different service models. Search strategy specified and papers included met specified criteria: de-

scriptive studies of service models and populations, effects studies. Results are given in detail. Descriptive studies included services where no specific provision is made for women, and services where wards are segregated (one for women and several for different categories of male patients). None of the papers measured effectiveness of model, and few recognised a need for specific provision for women. Population studies did not give data separately for women, but disproportionate numbers of women from ethnic minority groups. There was only one study of effectiveness of psychiatric care for women (this was conducted at Carstairs Special Hospital), it found a poorer outcome for women admitted from psychiatric hospital than from courts. Gaps in research appeared to be: knowledge of effects of different service models; impact of gender and social inequalities on women, and how they perceive themselves, their actions and needs; ways of measuring women's needs; experiences and needs of women diagnosed with PD; experience and needs of women from ethnic minority groups; comparative studies of male vs. women prisoners with mental illness; all population studies should give figures broken down by sex. Although this review included secure hospital provision and general psychiatric services, these research gaps do appear to accord with research into female prisoners with mental illness.

Regan, J.J.; Alderson, A.; and Regan, W.M. Psychiatric Disorders in Aging Prisoners, Clinical Gerontologist, 2002, 26: 117-124

Older prisoners with psychiatric problems are more likely to have committed murder and other violent offences, and 27% of older mentally ill prisoners have committed sex crimes. The authors call for additional research to compare older prisoners with mental illness with the rest of the prison population. The paper discusses the implications of an aging population within the prison system and considers the costs of incarcerating older prisoners versus care in the community.

Reviere, R and Young, V. Aging Behind Bars: health care for older female inmates, Journal of Women & Aging, Volume 16, Numbers 1-2, 22 April 2004: 55-69(15)

This paper reviews health needs of older female inmates and reports on a survey of health needs in this group in the USA. They found that institutions with large populations of mentally ill women were no more likely to offer mental health services than those with smaller numbers. They call for a more multi-disciplinary approach to mental health care (not just psychiatry) and training for staff in the recognition of mental illness and appropriate referral.

Teplin LA, Abram KM, McClelland GM. Mentally disordered women in jail: Who receives services? American Journal of Public Health 1997; 87: 604-9.

Survey of 1272 female arrestees awaiting trial in Chicago, US, all assessed for mental illness (116 [10.7%] were deemed to need services on set criteria, but only 23.5% of these received mental health care of any kind. Type of disorder, treatment history and demographic variables affected the odds of them receiving services.

Veysey, BM. Specific needs of women diagnosed with mental illnesses in U.S. jails. In Levin BL, Blanch AK, Jennings A, eds. Women's mental health services: A public health perspective, pp 368-89. Thousand Oaks, CA, US: Sage Publications, 1998.

Review of needs of women with mental illness in US jails. No indication of search strategy, and no overall aims. Identifies that women have high level of childhood and adult physical and sexual abuse, high levels of general health problems (AIDs, HIV, hepatitis, TB, STD), 67% have children under 18 years, they have higher levels of depression than men. For women to have access to services tailored to their unique needs jails must provide women specific mental health services including 'classification beyond simply being female' to prevent relatively small

populations of women being treated as homogenous group. 87% women are arrested for non-violent crime which has implications for treatment by staff and levels of security. Recommendations are made for women sensitive screening, medication, crisis intervention and women only treatment groups, training of prison staff, and use of outcome measures that acknowledge women's experiences.

Warren, J.I. and South, S. Comparing the Constructs of Anti-social personality disorder, Behavioural Sciences and the Law, 2006 24: 1-20

This paper explores the relationship between ASPD and psychopathy in incarcerated female offenders in terms of differential relationships to patterns of criminal behaviour, psychological adjustment, co-morbidity and other personality disorders, and victimisation. They found that the two disorders share common foundations of social norms violations and deception. ASPD was associated with impulsivity, aggression and irresponsible behaviour, increased likelihood of childhood abuse and greater co-morbidity with cluster A personality disorders. Psychopathology was associated with higher rates of property crime, previous incarceration and manifestation of remorselessness.

4.6.11 Roles and Responsibilities of Different Professional Groups

Appelbaum KL, Hickey JM, Packer I. The role of correctional officers in multidisciplinary mental health care in prisons. Psychiatric Services 2001; 52:1343-7
Stresses the importance of prison officers' contribution to the observation, assessment and management of prisoners with mental health problems. By virtue of continual contact with prisoners, correctional officers are the first to notice signs of change, and can provide important support on a subtle but long-term basis. They should therefore have a greater role in the ongoing monitoring and decision making about prisoners, more sense of being able to make a difference and play a part may begin to change their view of MDOs, and given appropriate information they are able to take more responsibility. They must come to view discipline and sanctions as an important part of maintaining safety, rather than as essential punishment. Collaboration rests on shred core values and respect, appropriate training, ongoing communication and co-operation.

Doyle, J Custody and caring: Innovations in Australian Correctional Mental Health Nursing Practice, Contemporary Nursing, 2003 14:305-311

This paper discusses the nature of mental health nursing in prison settings in Australia. The preliminary focus group identified issues of concern, and then 15 nurses were interviewed to gather qualitative data. The themes were problems with people adjusting to incarceration, challenging population to work with, prison environment contributing to mental distress including over-crowding, being under scrutiny, ideological conflict between caring and correction, and prisoners ambivalence towards nurses.

Fahy TA. The police as a referral agency for psychiatric emergencies - A review. Medicine, Science and the Law 1989; 29:315-22.

An observational study of the role of the police in recognising, managing and referring people with mental health problems.

Heilbrun K, Nunez CE, Deitchman MA, Gustafson D, et -al. The treatment of mentally disordered offenders: A national survey of psychiatrists. Bulletin of the American Academy of Psychiatry and the Law 1992; 20:475-80.

Nationwide survey of psychiatrists working with MDOs in public mental health hospitals to determine what kinds of treatments were being provided, for what problems, with what frequency and to what kinds of patients. Directors of psychiatry from 71% of 115 facilities responded. Responses revealed that treatments were largely appropriate, but many (e.g. anger management, CBT and behavioural treatment) were used

only rarely, and not always for the problems for which they have been shown to be most effective.

Lombardo LX. Mental-Health Work in Prisons and Jails - Inmate Adjustment and Indigenous Correctional Personnel. Criminal Justice and Behavior 1985; 12:17-28.

Argues that traditional mental health services for prisoners have focused on the needs of those with identified mental illness. Correctional staff could play an important role in the main prison area by assisting inmates to cope with the stress produced by everyday institutional living conditions. Training would focus on changing the 'lens' or beliefs/values of staff, so that their role is viewed as rehabilitative rather than controlling; as having an effect on the manner in which inmates experience confinement; as limiting the damaging effects of the environment.

Polczyk-Przybyla M,.Gournay K. Psychiatric nursing in prison: the state of the art?. [Review] [26 refs]. Journal of Advanced Nursing 1999; 30:893-900

Describes problems in prison nursing at Belmarsh Prison and subsequent review and change in the light of policy guidance. Significant increases were made in clinical staff and disciplinary staff, with streamlining of administrative responsibilities. This allowed nurses to focus on nursing rather than admin and security and reduction in managerial responsibilities. Impact of changes discussed - many still ongoing (e.g. achieving nurse training status, recruitment of staff, changing care planning system). Developing new therapeutic interventions specifically designed for prison environment e.g. nursing disturbed prisoners without medication (those who refuse medication must be transferred to NHS facility to be put on MHA section, but beds usually not available for several weeks); nursing prisoners in main prison (or developing optimum in-reach support from community teams).

Reiss, D and Famoroti, O.J. Experience of prison psychiatry: a gap in psychiatrists basic training, Psychiatric Bulletin, 2004 28: 21-22

They report on a survey of forensic psychiatric training with a sample of recently successful MRCpsych doctors. There was about 50% response rate (99/208) and 58% had trained under supervision of forensic psychiatrist. Of those not trained in forensic, 2/3 had never visited a prison. The authors predict that half of psychiatrists will emerge from specialist training with no prison experience and they recommend that prison mental health should be a mandatory part of training.

Roberts C, Hudson BL, Cullen R. Working with mentally disordered offenders: the training of probation officers. Issues in Social Work Education 1994; 14:34-50.

CCETSW funded survey of probation officers concerning their training needs in relation to MDOs. For 193 respondents, training, experience and relevance and content of training were surveyed. Findings suggest that basic training does not adequately cover mental health and forensic topics. A series of recommendations are made.

Rogers P,.Topping-Morris B. Prison and the role of the forensic mental health nurse. Nursing Times 1996; 92:32-4

Describes role of forensic nurse in medium secure units and potential for this role to be implemented in prison setting to improve mental health care available. Illustrated with a case example.

Shah PJ. Child and adolescent forensic psychiatry survey : in Scotland. Health Bulletin 2001; 59:54-6.

Survey of forensic psychiatrists (n=79, response rate 70%) regarding services for child and adolescent offenders in Scotland in order to assess: available expertise, how this is organised, 'experts' perceptions of need for a specialist service, and referral

criteria to such a service. Findings: only 3 psychiatrists had forensic training; few knew of a colleague to consult re child and adolescent offenders, the majority would refer the most difficult cases to a child and adolescent forensic psychiatrist if they were available.

Towl G. What do forensic psychologists in prison do? British Journal of Forensic Practice 1999; 1:9-11.

Describes the role of forensic psychologists. Lists types of work: group work ('in enhanced thinking skills' and 'reasoning and 'rehabilitation', and with sex offenders, young offenders and women); management of more difficult and disruptive prisoners; in therapeutic communities; risk assessment and management of lifers; staff recruitment and training; research, policy and practice with lifers; with drug abusers. No outcome data presented.

Yates S. Promoting mental health behind bars. Nursing Standard 1994; 8:18-21

Describes (with no outcome data) development of a prison psychiatric nursing service at Barlinnie Jail, importance attached to: developing a nurse led assessment system on arrival; giving treatment within main halls of the prison rather than just in psychiatric unit; liaising with all other staff; setting up a mental health forum - now run by discipline officers; providing group therapy for groups of prisoners with particular problems, working with CPN input to liaise with 'outside', working as advocates (preventing exploitation of vulnerable prisoners), training discipline officers.

Young, D.S. Non-Psychiatric Services Provided in a Mental Health Unit in a County Jail, Journal of Offender Rehabilitation 2002; 35: 63-

This reports on a retrospective review of 359 mentally ill inmates in a county jail in New York. Male inmates stayed longer on the mental health unit, and inmates with psychotic disorders had significantly more service episodes.

4.6.12 Service Users

Morgan, R.D. Rozycki, A.T. and Wilson, S. Professional Psychology: Research and Practice, 2004, 35:389-396

There is a paucity of literature on inmates perceptions of mental health needs and the services they would prefer to use. A survey of their needs was conducted (n=418) with a 70% participation rate. 36% used mental health services and the preference was for individual over group therapy. Newly incarcerated inmates were more likely to hold negative views of mental health care and less likely to know how to access it if they needed it. They recommend that newly incarcerated prisoners have information about mental health, what is on offer in terms of services, and how to access these.

Nurse, J. Woodcock, P and Ormsby, J Influence of environmental factors on mental health within prisons: focus group study, British Medical Journal, 2003, 327: 480-485

Despite the high prevalence of mental disorders in prisoners, little attention has been paid to examining the impact of prison on mental health. This study collected qualitative data within focus groups of prisoners in a south England prison. They identified themes such as isolation and lack of mental stimulation, drug misuse as a reaction to boredom, negative relationships with prison staff, bullying and lack of family and other close contact. The staff perceived a lack of management support, negative work culture, and high levels of stress which led to high levels of sickness which in turn increased the burden of the remaining staff leading to more stress and so on.

Spudic, T.J. Assessing Inmate Satisfaction with Mental Health Services Special Series: Behaviour Therapy in Correctional Settings, January 2003, 217-8

A consumer satisfaction questionnaire was administered to inmates housed over a 2 year period in the mental health unit of a state prison in the USA. The responses should be viewed in the context that good

mental health care doesn't always get rated highly by consumers. For example medication may not be seen as a positive thing by someone with psychosis. Overall ratings were "good" but there was room for improvement. No statistical analysis was performed on the data collected to compare levels of satisfaction for different groups.

Vaughn, P.J. and Stevenson, S An Opinion Survey of Mentally Disordered Offender Service Users, British Journal of Forensic Practice 2002; 4: 11-20

This reports on a survey of 50 prisoners who were interviewed regarding their opinions of services. They had negative views of police, feeling that they were treated badly, with a lack of understanding and that they took no account of their mental health problems. They were mistrustful of social workers who they perceived as authority figures with the power to section them and take children away. A large proportion of the prisoners didn't have serious mental illness; they had personality disorders and substance misuse. Although their needs were great, they often got excluded from mainstream mental health services. The authors report that there is a clear need for community services to broaden their referral criteria and focus on need as opposed to diagnosis. Mentally disordered offenders may be distrustful of services and may require an assertive outreach approach to engage in community services after release from prison.

4.6.13. New Interventions

Manfredi, L.; Shupe, J.; and Bakti, S Rural Jail Psychiatry: A Pilot Feasibility Study Telemedicine and e-Health 2005 11: 574-577

This paper describes a pilot feasibility study for telepsychiatry in a rural New York state prison. Urban-based psychiatrists provided consultations to 15 inmates over a period of 6 months resulting in 37 consultations. Anecdotal evidence suggests that it was acceptable to service users and cost- effective.

4.7 Excluded Papers (categorised by reason for exclusion)[2]

4.7.1 Description of Problems/Needs of specific groups of prisoners with no explicit implications for treatment (included if studies of interventions/systems to support specific groups)

Abram KM, Teplin LA. Co-occurring Disorders Among Mentally-Ill Jail Detainees - Implications for Public Policy. American Psychologist 1991; 46:1036-45

Birmingham L. Between prison and the community - The 'revolving door psychiatric patient' of the nineties. British Journal of Psychiatry 1999; 174:378-9

Coid J. Mentally abnormal prisoners on remand: 1 – rejected or accepted by the NHS? British Medical Journal 1988; 29 :1779-82

Coid J. Mentally abnormal prisoners on remand: II: comparison of services provided by Oxford and Wessex regions. British Medical Journal 1988; 296:1783-4.

Sims NE. The mentally disordered offender in the criminal justice system. Dissertation Abstracts International 1990; 50:5893

4.7.2. Papers that do not refer to people in prison OR do not refer to people with mental illness

Aderibigbe YA. Deinstitutionalisation and criminalisation: tinkering in the interstices. Forensic Science International 1997; 85:127-34

Bailey D. Services for mentally disordered offenders: a literature review. Social Services Research, University of Birmingham 1996; 3:41-57

Birmingham L. Between prison and the community - The 'revolving door psychiatric patient' of the nineties. British Journal of Psychiatry 1999; 174:378-9

2 *Organised alphabetically within each category*

Draine J,.Solomon P. Describing and evaluating jail diversion services for persons with serious mental illness. Psychiatric Services 1999; 50:56-61.

Drewett, A. and Shepperdson, B. A literature review of services for mentally disordered offenders. 1995. Nuffield Community Care Studies Unit, University of Leicester.

Gottschalk R, Davidson II WS, Gensheimer LK, Mayer JP. Community-based interventions. In Quay HC, ed. Handbook of Juvenile Delinquency, pp 266-89. New York: Wiley, 1987.

Laing, J.M. Mentally Disordered offenders and their diversion from the criminal justice process. PhD, Leeds, 1996

Lamb HR,.Bachrach LL. Some perspectives on de-institutionalisation. [Review] [74 refs]. Psychiatric Services 2001; 52:1039-45

Lattimore PK, Witte AD, Baker JR. Experimental Assessment of the Effect of Vocational Training on Youthful Property Offenders. Evaluation Review 1990; 14:115-33.

McCabe J. Women in special hospitals and secure psychiatric containment. Mental Health Review 1996; 1:28-30.

Metzner JL,.Dubovsky SL. The role of the psychiatrist in evaluating a prison mental health system in litigation. Bulletin of the American Academy of Psychiatry and the Law 1986; 14:89-95.

Prins H. Literature review: Psychiatry: Dangerous offenders. British Journal of Social Work 1983; 13:443-8.

Robertson G, Pearson R, Gibb R. The entry of mentally disordered people to the criminal justice system. British Journal of Psychiatry 1996; 169:172-80

Rogers R,.Bagby RM. Diversion of Mentally Disordered Offenders - A Legitimate Role for Clinician. Behavioral Sciences & the Law 1992;10:407-18

The World Health Report 2000. Health Systems: Improving Performance. 2000. World Health Organisation

Tyrer P, Coid J, Simmonds S, Joseph P, Marriott S. Community mental health teams (CMHTs) for people with severe mental illnesses and disordered personality (Cochrane Review). The Cochrane Library, Issue 3, 2002. Oxford: Update Software. 2002.

Vaughan PJ. A consortium approach to commissioning services for mentally disordered offenders. Journal of Forensic Psychiatry 1999; 10:553-66

Widiger TA, Corbitt EM. Antisocial personality disorder. In Livesley WJ, ed. The DSM-IV personality disorders. Diagnosis and treatment of mental disorders, pp 103-26.
New York, US: The Guildford Press, 1995.

4.7.3 Service descriptions

Armitage, C., Fitzgerald, C., Cheong, P., Armitage, C., Fitzgerald, C., & Cheong, P. (2003). Prison in-reach mental health nursing. Nursing Standard, 17, 40-42.

Carr K, Hinkle B, Ingram B. Establishing mental health and substance abuse services in jails. Journal of Prison and Jail Health 1991; 10:77-89
Describes mental health and substance abuse program at Henrico County Jail including training of staff, developing trust with inmates, conservative medication, breaking down differences in psychological treatments and prison regimes – no outcomes reported.

Day, A. & Howells, K. (2002). Psychological treatments for rehabilitating offenders: Evidence-based practice comes of age. Australian Psychologist, 37, 39-47.

Durcan G & Knowles K (2006). London's Prison Mental Health Services: A Review. The Sainsbury Centre for Mental Health

Greene RT. A Comprehensive Mental-Health Care System for Prison-Inmates - Retrospective Look at New-Yorks 10 Year Experience. International Journal of Law and Psychiatry 1988; 11:381-9

Haddad JE. Implementing effective in-prison outpatient care for inmates with serious mental illness - The Ohio experience. In Landsberg G, Smiley A, eds. Forensic mental health: Working with offenders with mental illness, pp 19-1-19-11. Civic Research Institute, 2001

Huckle P., Williams T. Providing a forensic psychiatric service to Cardiff Prison. Psychiatric Bulletin 1994; 18:670-2

Johnson SC,.Hoover JO. Mental health services within the Federal Bureau of Prisons. Psychiatric Annals 1988; 18:673-4.

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Murugesan G. Care of the mentally ill offender. A model service. [3 refs]. Medicine & Law 1999;18:601-6

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Smith JA,.Faubert M. Programming and process in prisoner rehabilitation: A prison mental health center. Journal of Offender Counseling, Services and Rehabilitation (New York) 1990;15:131-53.

Telfer J. Balancing care and control: introducing the care programme approach in a prison setting. Mental Health and Learning Disabilities Care 2000; 4:93-6

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4.7.4 Ethics/Rights of prisoners

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Leibman FH,.Leibman N. Developing trends in prisoners' rights to mental health treatment. American Journal of Forensic Psychology 1991; 9:19-28.

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Williams P. The right of prisoners to psychiatric care. Journal of Prison and Jail Health 1983; 3:112-8

4.7.5 The Law and Mentally Disordered Offenders

Akinkunmi A,.Murray K. Inadequacies in the Mental Health Act, 1983 in relation to mentally disordered remand prisoners. Medicine Science and the Law 1997;37:53-7
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posals for consultation. London: The Stationery Office, 1999, 1999.

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[Anon] Managing dangerous people with severe personality disorder: proposals for policy development. London: - 50 Queen Anne's Gate, London SW1H 9AT: Home Office; London: Department of Health, available from PO Box 777, London SE1 6XH, 1999

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4.7.9 Refers to Juveniles

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SECTION 5 - DISCUSSION OF FINDINGS

The 2001 review (Brooker et al,2003) aimed to elicit literature relating to mental disorder and prisons in order to inform future research priorities that would underpin policy development in this area. The review was divided into three main sections; a background paper (policy, epidemiology and a review of effective mental health interventions for the general population), a review of effective interventions for prisoners with mental disorder and a review of research focusing on service delivery and organisation of mental health services for prisoners. This review was then updated in 2006/7 by a team at the University of Lincoln. The Lincoln team, however, were not resourced to update the review of effective mental health interventions for the general population.

It is noteworthy that in the first review (which included all literature meeting our criteria from 1983-2002) 2,502 papers were identified originally which after further sorting led to 392 papers being obtained and 140 included. In this update, 4335 papers met our initial search criteria with 198 full copies obtained and 54 new studies finally included. Thus, in the period between 1983-2002, 7.4 papers that met our criteria were published, in comparison between 2002 and 2006, 13.5 papers were published nearly doubling the output in the first review phase.

As in the 2001 review, the traditional review of epidemiology clearly demonstrated that there is a much higher prevalence for all mental disorders for prisoners when compared with the general population. This was especially true for sub-groups within the prison population such as women. The high levels of co-morbidity in the prison population are also a significant issue. However, point prevalence studies are cross-sectional, and provide us with no understanding about the aetiology of mental disorder in prisoners. The 2001 review asked whether prisoners arrive at reception with a mental disorder already established or whether the disorder develops in the prison environment. This remains a key question, with important implications for policy, warranting further rigorous examination. We are aware that commissioners are still seeking to fund studies that examine the prevalence of mental health disorder in prisons both in England and abroad. We question the value of any further funding being spent in this manner given the myriad of well designed studies that already exist that allow robust estimates to be derived.

The review of effective mental health interventions for the general population illustrated the variation in the quality and quantity of available evidence (in the key diagnostic groups that are most represented in prisons). Whilst it might appear to be clear that certain interventions will have a demonstrable impact on prisoner's mental health status this cannot always be taken for granted. First, prisoner's high levels of co-morbidity will complicate this picture. Second, outcomes achievable in community settings might not be so readily achievable in prisons, for example, improvements in social functioning. Nonetheless, to date, no serious or systematic attempt has been made to consider the utility of effective mental health interventions for the general population in the prison context. We would urge groups, such as NICE, that develop guidelines based on such reviews to consider the possible impact on prisoners where appropriate.

The review of effective interventions for prisoners themselves was illuminating. There is a paucity of high quality research in this area with only one randomised controlled

trial ever undertaken. It is possible to speculate on the reasons: focus on 'systems-level' policy initiatives; little development of appropriate outcome measures; problems with obtaining informed consent; the highly rapid movement of prisoners around the estate; and a lack of prison ownership of the research agenda. Whatever the reasons, prison effectiveness research (in the context of the MRC Framework for Complex Interventions) is at a very early phase of development.

This is true too of the prison mental research agenda in the field of SDO the largest and most complex area of the review. Here, one focus was on the provision of theoretical frameworks that demonstrate the ways in which mental health service provision and the criminal justice system exist in 'parallel universes'. The review of the SDO literature was both disappointing and encouraging. Clearly, screening studies have increased usefully in number significantly, given the need to establish the existence (or otherwise) of a mental health disorder at reception to prison this is important. A similar increase is observable in the literature of the needs of specific groups such as older people, those from ethnic minority groups and women – again this is encouraging. It has also become clear that user involvement is as important area to address in prison mental health research as it is elsewhere. The original review did not include any papers that so much as describe the 'service user' perspective let alone evaluate it. However, 4 papers were included in the updated review and we are aware that a new group has been funded by the mental health research network - SUCESS (Service User and Carer Experience in Secure Settings), based in Oxleas Trust. In addition, the Sainsbury Centre for Mental Health has been undertaking an, as yet unpublished, review of user involvement in the criminal justice system funded by the Prison Health Research Network.

However, the picture within the SDO review section is not all so optimistic. There has been no increase in robust papers describing local service evaluations (where one might imagine there is considerable scope, i.e. the collection of routine outcome data, data on successful discharge to community-based agencies to name but two). Similarly, there is little increase in studies that consider pathways or the journey that prisoners take within the criminal justice system to access appropriate care and treatment. This, of course, includes prisons but also contact with formal community-based psychiatric services prior and after imprisonment and also access to routine physical health care for prisoners with a mental health disorder.

To conclude, whilst the amount of quality output associated with mental health disorder and prisons has recently increased there is no room for complacency. One-third of the total output is devoted to an increasingly large literature on the prevalence of mental health disorder. In comparison, the amount of quality research published on the effectiveness of mental health interventions in prisons is pitifully small. Finally, whilst the SDO literature has increased in important areas such as screening and the needs of particular groups other issues of importance to service development, such as pathways research, are pitifully small.

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APPENDICES

APPENDIX A: The Research Team

Project Lead for Original and 'Updated' Review

Prof. Charlie Brooker
Role: Project leader, project manager, content expert, report writer

Original Members of the Project Team

Catherine Beverley
Role: Literature searcher, literature reviewer (epidemiological review), report writer

Naomi Brewer
Role: Literature searcher (where required), literature reviewer (general population review), report writer

Mike Ferriter
Role: Literature reviewer (prisoner review), content expert, report writer

Julie Repper
Role: Literature reviewer (prisoner review), report writer

Members of the 'Updated' Review Team

Coral Sirdifield
Role: Literature reviewer (epidemiological review), report writer

Dina Gojkovic
Role: Literature reviewer (interventions review), report writer

Lynda Ayiku
Role: Literature searcher

Marishona Ortega, Di Walker and Rose Wych
Role: Support with acquiring copies of articles

APPENDIX B: Sample Medline Search Strategy

1 *prisoners/
2 exp *prisons/
3 prison$.ti
4 jail$.ti
5 remand$.ti
6 imprison$.ti
7 offend$.ti
8 criminal$.ti
9 detention.ti
10 convict$.ti
11 correctional facilit$.ti
12 court$.ti
13 detain$.ti
14 inmate$.ti
15 probat$.ti
16 sentenced.ti
17 crime$.ti
18 felon$.ti
19 misdemean$.ti
20 deliquent$.ti
21 *juvenile deliquency/
22 goal$.ti
23 or/1-22
24 *mental health/
25 exp *mental health service/
26 exp *mental disorders/
27 mental$ health.ti
28 mental$ ill$.ti
29 mental4 disorder$.ti
30 depress$.ti
31 schizophreni$.ti
32 suicid$.ti
33 psychos$.ti
34 psychiatr$.ti
35 forensic.ti
36 exp *forensic medicine/
37 exp *forensic psychiatry/
38 or/24-37
39 23 and 38
40 therapeutic community/
41 therapeutic communi$.tw
42 therapeutic living.tw
43 assertive case management.tw
44 intensive case management.tw
45 assertive community treatment.tw
46 crisis intervention/
47 cris$ intervention$.tw
48 social support system$.tw
49 exp*social support/
50 (manag$ adj3 violen$).tw
51 rehabilitation, vocational/
52 vocational rehabilitation.tw
53 psychosocial rehabilitation.tw
54 psycheducation$.tw
55 housing program$.tw
56 psychotherapy/
57 exp behavior therapy/
58 (cognitive adj2 therap$).tw
59 ((behaviour$ or behavior$) adj2 therap$).tw
60 exp *antipsychotic agents/
61 antipsychotic$.ti
62 exp *antidepressive agents/
63 antidepressant$.ti
64 or/40-63
65 23 and 64
66 39 or 65

Table 2.1. Prevalence of Mental Disorders in Sentenced Prisoners

Study	Population	Methods	Key findings regarding prevalence of mental health problems among prisoners
Assadi *et al.*, (2006) **Study/ publication type:** Journal article **Aim:** To estimate the prevalence of psychiatric disorders in prisoners in Iran	**Country:** Iran **Year(s) of data collection:** June 2002- October 2003 **Prison type(s):** Qasr prison – one large male prison **Prisoner type(s):** Sentenced prisoners **Age of prisoners:** 17-76 years **Sex of prisoners:** Male **Mental disorders covered:** Psychotic disorder, mood disorder, anxiety disorder, substance use disorder, somatoform disorder, adjustment disorder, psychopathy	**Assessment of psychiatric morbidity:** Prisoners were interviewed using the Clinical Version of the Structured Clinical Interview for DSM-IV Axis 1 Disorders (SCID-IV) and the Hare Psychopathy Checklist – Screening Version (PCL-SV). **Sample:** Stratified random sample of 351 prisoners. Stratified by type of index offence to ensure adequate representation of all categories of offence. **Interviews:** Conducted by 4 interviewers, all of which were third-year psychiatric trainees who had prior experience with structured diagnostic interviews and completed a 5-day training programme. Interviews took an average of 90 min. Interviewers were supervised by a board-certified psychiatrist. **Response rates:** The study aimed to recruit 80 prisoners from each of 5 categories of offence – to give a total sample size of 400. However, 49 prisoners (12%) refused to participate in the study.	**Personality disorders:** Not stated **Neurotic disorders:** - 7.7% diagnosed with anxiety disorders, with generalised anxiety being the most prevalent (5.7%) - "Specific phobia, post-traumatic stress disorder, social phobia and obsessive-compulsive disorder were diagnosed in 1.0%, 0.7%, 0.6% and 0.3% of participants respectively" (160) **Alcohol misuse and drug dependence:** No participants met the diagnostic criteria for current alcohol abuse or dependence. 9.5% participants were diagnosed with current opioid abuse and dependence. 0.8% of participants were diagnosed with cannabis and sedative use disorders, and 0.9% with hypnotic or anxiolytic use disorders. **Self-harm (suicidal ideation, suicide attempts and parasuicide):** Not stated **Psychotic and affective disorders:** - 2.0% had schizophrenia, 0.3% delusional disorder and 0.8% psychotic disorder not otherwise specified - 29.1% of the sample met diagnostic criteria for major depressive disorder and 1.5% for dysthymic disorder. Of those with major depressive disorder, 17.8 = mild depressive episode, 39.6% for moderate episode, 38.5% for severe episode without psychotic features, and 4.1% for severe episode with psychotic features. - None of the sample met the criteria for bipolar disorder **Co-occurrence of mental disorders:** "Substance use disorders were the main comorbid disorders in diagnostic categories. Mood disorders were highly prevalent in participants with anxiety, substance use and somatoform disorders. Comorbid anxiety disorders were seen in a quarter of participants with mood disorders and about half of participants with somatoform disorders" (160)

Study	Population	Methods	Key findings regarding prevalence of mental health problems among prisoners
Fazel S, and Grann M, (2004) **Study/ publication type:** Journal article (Brief report) **Aim:** To investigate the prevalence of psychiatric morbidity among homicide offenders in Sweden	**Country:** Sweden **Year(s) of data collection:** January 1st 1988 – December 31st 2001 **Prison type(s):** Used information from the forensic psychiatric evaluation database and the hospital discharge register **Prisoner type(s):** Sentenced **Age of prisoners:** 15-90 years **Sex of prisoners:** Male and female **Mental disorders covered:** Psychoses, personality disorders, substance use disorder, nonpsychotic depressive disorders, anxiety disorders, PTSD, adjustment disorders, child and adolescent disorders, mental retardation, other axis 1 diagnosis	**Assessment of psychiatric morbidity:** Used information from the forensic psychiatric evaluation database and the hospital discharge register **Sample:** 2,005 homicide offenders – convictions for murder, manslaughter, attempted murder or attempted manslaughter **Interviews:** N/A **Response rates:** Information from standardized psychiatric assessments was gathered for 1,625 individuals – 81%	**Personality disorders:** 14% of offenders had a principal diagnosis of personality disorder. **Neurotic disorders:** 0.5% of offenders were diagnosed with PTSD 1.4% of offenders were diagnosed with anxiety disorders 2.8% of offenders were diagnosed with adjustment disorders **Alcohol misuse and drug dependence:** 24% of offenders had a principal diagnosis of substance use **Self-harm (suicidal ideation, suicide attempts and parasuicide):** Not stated **Psychotic and affective disorders:** 20.4% overall prevalence rate. 8.9% schizophrenia, 2.5% bipolar affective disorder, 6.5% other psychoses, 1.4% drug-induced psychoses, 1% organic psychoses **Co-occurrence of mental disorders:** Not stated N.B. Figures for this section are those given for the whole population group (2,005 individuals)

Table 2.1. Prevalence of Mental Disorders in Sentenced Prisoners (continued)

Study	Population	Methods	Key findings regarding prevalence of mental health problems among prisoners
Gunn *et al.*, 1991[17] Also refer to Gunn *et al.* (1991)[16] **Study/ publication type:** Journal article/ population survey **Aim:** - To describe the prevalence of psychiatric disorder and the treatment needs of sentenced prisoners in England and Wales	**Country:** England and Wales **Year(s) of data collection:** 1988/1989 **Prison type(s):** 16 prisons for adult males and 9 institutions for male young offenders, representative of all prisons in prison type, security levels, and length of sentences **Prisoner type(s):** Sentenced prisoners **Age of prisoners:** Adult & young offenders **Sex of prisoners:** Male only	**Assessment of psychiatric morbidity:** - Semi-structured interview **Sample:** - Population survey based on 5% sample of men serving prison sentences - 406 young offenders & 1478 adult men **Response rate:** - 404 and 1365 respectively agreed to be interviewed	**Personality disorders:** - 10% personality disorder **Neurotic disorders:** - 5.9% neurotic disorder **Alcohol misuse and drug dependence:** - 23% substance misuse - 11.5% alcohol dependence - 11.5% drug dependence **Self-harm (suicidal ideation, suicide attempts and parasuicide):** - Not stated **Psychotic and affective disorders:** - 2% psychosis - 1.2% schizophrenia - 0.4% affective psychosis **General mental disorders:** - 37% had psychiatric disorders diagnosed
Gunn *et al.* (1991)[16] Also refer to Gunn *et al.* (1991)[17] **Study/ publication type:** Report/ population survey **Aim:** - Not explicitly stated	**Country:** England and Wales **Year(s) of data collection:** 1988/1989 **Prison type(s):** Open, closed & training prisons for adult males, young male offenders and women prisoners **Prisoner type(s):** Sentenced prisoners **Age of prisoners:** Adult & young offenders & female prisoners **Sex of prisoners:** Male & female	**Assessment of psychiatric morbidity:** - Semi-structured interview using CIS **Sample:** - 1478 adult men, 406 male youths, 280 females **Response rate:** - 1365 adult males, 404 male youths, 273 females	**Personality disorders:** - 7.3% personality disorder adult males, cf 11.4% male youths, cf 8.4% females **Neurotic disorders:** - 5.2% neurotic disorder, cf 4.5% male youths, cf 13.2% females **Alcohol misuse and drug dependence:** - 20.1% substance misuse, cf 15.8% male youths, cf 28.9% females - 8.6% alcohol dependence - 10.1% drug dependence **Self-harm (suicidal ideation, suicide attempts and parasuicide):** - Not stated **Psychotic and affective disorders:** - 2.4% psychosis, cf 0.2% male youths, cf 1.1% females - 1.5% schizophrenia, cf 0.2% male youths, cf 1.1% females - 0.5% affective psychosis, cf 0% male youths, cf 0% females

Study	Population	Methods	Key findings regarding prevalence of mental health problems among prisoners
Huang *et al.*, (2006) **Study/ publication type:** Journal article **Aim:** To investigate the prevalence and characteristics of trauma and posttraumatic stress disorder in female prisoners in China	**Country:** China **Year(s) of data collection:** May – October 2004 **Prison type(s):** New Road Occupational School in Female Prison in Hunan Province **Prisoner type(s):** Sentenced prisoners **Age of prisoners:** 16-54 years **Sex of prisoners:** Female **Mental disorders covered:** PTSD	**Assessment of psychiatric morbidity:** Chinese version of the Symptom Checklist-90-Revised (SCL-90-R) Chinese version of the Self-reported Traumatic Life Events Questionnaire Clinician-administered PTSD scale (CAPS) **Sample:** Aimed for a random sample of 482 female prisoners from the New Road Occupational School in the female prison in Hunan Province, China. Achieved a sample of 471 women. All of the women had at least 3 years of formal education, spoke Chinese as a home language and were of Chinese Han nationality. The sample was divided into those aged under and over 25 years old. **Interviews:** Self-report questionnaires administered by an on-site psychiatrist, interviewed by two psychiatrists in private rooms within the prison. Length of interviews ranged from 15-55 mins. Subjects offered counselling after interviews. **Response rates:** Response rate was 100%, but 11 women had to be excluded due to issues such as failing to finish the questionnaire/illness/unwillingness to discuss traumatic events.	**Personality disorders:** Not stated **Neurotic disorders:** Lifetime prevalence of PTSD was 20.8% of the younger group and 14.1% of the older group – 15.9% overall. Current prevalence of PTSD was 15.4% for the younger group and 8.8% for the older group – 10.6% overall. **Alcohol misuse and drug dependence:** Not stated **Self-harm (suicidal ideation, suicide attempts and parasuicide):** Not stated **Psychotic and affective disorders:** Not stated **Co-occurrence of mental disorders:** Not stated

Table 2.1. Prevalence of Mental Disorders in Sentenced Prisoners (continuted)

Study	Population	Methods	Key findings regarding prevalence of mental health problems among prisoners
Sailas *et al.*, (2005) **Study/ publication type:** Journal article **Aim:** To compare psychiatric hospitalisations of prisoners aged 15-21 in 1984-5 with those in 1994-5 to see whether there is an increase in the number of mentally ill young people in prison as the prison population decreases.	**Country:** Finland **Year(s) of data collection:** 1984-5 and 1994-5 **Prison type(s):** N/A **Prisoner type(s):** Sentenced **Age of prisoners:** 15-21 **Sex of prisoners:** Male and Female **Mental disorders covered:** Depression, psychosis, and personality disorder. Also collected data on substance dependence.	**Assessment of psychiatric morbidity:** Data taken by linking prisoner ID numbers with the Finnish healthcare register **Sample:** 656 prisoners in 1984-5 (719 if include 63 missing ID numbers); and 370 from 1994-5 (377 if include 7 missing ID numbers) **Interviews:** No interviews were conducted – the researchers compared records from two year groups **Response rates:** See sample	**Personality disorders:** 16.8% of the prisoners in the first cohort, and 17% of the prisoners in the second cohort were diagnosed with a personality disorder. **Neurotic disorders:** 3.5% of the prisoners in the first cohort, and 3.5% of the prisoners in the second cohort were diagnosed with depression. **Alcohol misuse and drug dependence:** 5.9% of prisoners in the first cohort and 15.4% of prisoners in the second cohort were diagnosed with substance dependence. **Self-harm (suicidal ideation, suicide attempts and parasuicide):** Not stated **Psychotic and affective disorders:** 2.6% of prisoners in the first cohort and 6.5% of prisoners in the second cohort were diagnosed with psychosis. **Co-occurrence of mental disorders:** Not stated

Study	Population	Methods	Key findings regarding prevalence of mental health problems among prisoners
Warren *et al.*, (2002) **Study/ publication type:** Journal article **Aim:** To examine the relationship between Axis II disorders and violence	**Country:** USA **Year(s) of data collection:** Not stated **Prison type(s):** Maximum security female prison **Prisoner type(s):** Sentenced **Age of prisoners:** **Sex of prisoners:** Female **Mental disorders covered:** Personality disorder	**Assessment of psychiatric morbidity:** Larger study employed the Structured Clinical Interview for DSM-IV Personality Screening Questionnaires (SCID-II) and the Brief Symptom Inventory (BSI). Also assessed violent behaviour and criminality. **Sample:** 261 female felons held in a maximum security prison for women who had been screened previously as part of a data collection exercise screening 802 women (c. 80% of the prison population). The sample was split into an experimental group of randomly chosen women who did not self-report psychotic symptoms on the BSI, but self-reported sufficient criteria to suggest a Cluster B PD diagnosis on the SCID-II Screen; and a control group of women who did not self-report psychotic symptoms on the BSI, and did not meet criteria for a cluster B PD diagnosis on the SCID-II Screen. **Interviews:** Took between 1.5 and 3 hours to complete. **Response rates:** 95% of women identified agreed to participate in the clinical interviews	**Personality disorders:** 43% of the sample met the criteria for antisocial personality disorder, 27% for paranoid, 24% for borderline, 5% for schizoid, 4% for dependent, 4% for histrionic, 4% for schizotypal, 10% for narcissistic, 14% for avoidant, and 15% for obsessive-compulsive. **Neurotic disorders:** Not stated **Alcohol misuse and drug dependence:** Not stated **Self-harm (suicidal ideation, suicide attempts and parasuicide):** Not stated **Psychotic and affective disorders:** Not stated **Co-occurrence of mental disorders:** Co-morbidity rates above 40% were shown for antisocial and borderline PD. “Antisocial PD was found to be comorbid with Paranoid PD (69%), Schizoid PD (54%), and Schizotypal PD (56%) and Borderline PD with Schizotypal PD (67%), Paranoid PD (41%), and Antisocial PD (43%).

Table 2.2. Prevalence of Mental Disorders in Remand Prisoners

Study	Population	Methods	Key findings regarding prevalence of mental health problems among prisoners
Abram, Teplin and McCelland, 2003 **Study/publication type:** Journal Article (Brief Report) **Aims:** To examine the comorbidity of severe psychiatric disorders and substance use disorders among female jail detainees	**Country:** USA **Year(s) of data collection:** 1991-1993 **Prison type(s):** Cook County Department of Corrections, Chicago **Prisoner type(s):** Remand – awaiting trial **Age of prisoners:** Not stated **Sex of prisoners:** Female	**Assessment of psychiatric morbidity:** National Institute of Mental Health Diagnostic Schedule Version III-R administered by Independent clinical research interviewers in the jail's intake area, usually within 24 hours of entry. **Sample:** Randomly selected sample of 1,272 female arrestees stratified by charge and race. **Response rate:** 59 (4.2%) sample refused to participate, and another 87 individuals (6.1%) were unable to complete the interview	**Personality disorders:** Not stated **Neurotic disorders:** Not stated **Alcohol misuse and drug dependence:** In the group with no severe mental disorders, 17.4% had an alcohol use disorder. 45.5% had a drug use disorder, and 11.1% had both a drug and alcohol use disorder. In the group with severe mental disorders, 31.9% had an alcohol use disorder, 61.7% had a drug use disorder, and 21.6% had both an alcohol and drug use disorder. **Self-harm (suicidal ideation, suicide attempts and parasuicide):** Not stated **Psychotic and affective disorders:** For those with schizophrenia or manic episode 72.1% also had an alcohol or drug use disorder, For those with major depressive episodes, 74.2% also had an alcohol or drug use disorder **General mental disorders:** Not stated **Co-occurrence of mental disorders:** Almost three-quarters of the women had both a severe mental disorder, and a substance misuse disorder

Study	Population	Methods	Key findings regarding prevalence of mental health problems among prisoners
Andersen, 2004 **Study/publication type:** Journal article **Aims:** To review the literature on mental health in prison populations and relate the findings to a Danish study of the prevalence of psychiatric morbidity and drug dependence in prisoners in solitary confinement/non solitary confinement	**Country:** Denmark **Year(s) of data collection:** October 1991 – February 1993 **Prison type(s):** Vestre Faengsel – the largest Danish remand prison **Prisoner type(s):** Remand prisoners **Age of prisoners:** 18-60 **Sex of prisoners:** Male and female	**Assessment of psychiatric morbidity:** Series of psychiatric examinations including: - Present State Examination, version 10 - Hamilton Depression Scale (HDS) - Hamilton Anxiety Scale (HAS) - Global Assessment Scale (GAS) - A Visual Analogue Scale (VAS) - Hare's Psychopathy Checklist-Revised (PCL-R) - GHQ-28 - Semi-structured interviews developed for the study re: substance missue, past and present medical and psychiatric history, and demographic data. **Sample:** Random selection of 251 subjects who are fluent in Danish, and are not in disciplinary/voluntary SC taken from lists of all new prisoners. 139 individuals were in solitary confinement, and 112 were not. **Response rate:** 96% (n=133) of solitary confinement subjects, and 85% (n=95) of non-solitary confinement subjects participated in the study.	**Personality disorders:** Not stated **Neurotic disorders:** The aggregated current rate of neurotic disorders was 16% **Alcohol misuse and drug dependence:** 31% dependent on heroin, and 37% lifetime dependent **Self-harm (suicidal ideation, suicide attempts and parasuicide):** Not stated **Psychotic and affective disorders:** The aggregated current rate of psychotic disorders was 7%, and for mood disorders, this figure was 10%. The aggregated current rate of schizophrenia was 4% **General mental disorders:** Not stated

Table 2.2. Prevalence of Mental Disorders in Remand Prisoners (continued)

Study	Population	Methods	Key findings regarding prevalence of mental health problems among prisoners
Birmingham *et al.*, 1996[5] **Study/publication type:** Journal article/ survey **Aims:** - To define the prevalence of mental disorder & need for psychiatric treatment in new remand prisoners - To determine to what extent these are recognised & addressed in prison **Note:** Also relates to Grubin et al., 1997	**Country:** England (Durham Prison) **Year(s) of data collection:** 1995/1996 **Prison type(s):** Large remand prison for men (HMP Durham) **Prisoner type(s):** Remand, awaiting trial **Age of prisoners:** 21 years and over **Sex of prisoners:** Male only	**Assessment of psychiatric morbidity:** - Semi-structured psychiatric interview **Sample:** - 569 men - Consecutive male remand prisoners at reception **Response rate:** - 549 (96%) consented to be interviewed, 19 refused, 1 unfit - 528 interviews fully completed	**Personality disorders:** - 38 (7%) personality disorder **Neurotic disorders:** - 34 (6%) anxiety disorders - 17 (3%) adjustment disorders **Alcohol misuse and drug dependence:** - Not stated **Self-harm (suicidal ideation, suicide attempts and parasuicide):** - Not stated **Psychotic and affective disorders:** - 20 (4%) schizophrenia & other psychotic disorders - 4 (1) affective psychosis - 13 (2%) major mood disorder - 14 (2%) dysthymic disorder **General mental disorders:** - 148 (25%) one or more current mental disorder (excluding substance misuse)
Brooke *et al.* (1996)[36] **Study/publication type:** Journal article/ survey **Aims:** To determine prevalence of mental disorder among male unconvicted prisoners and to assess treatment needs of this population **Note:** Also relates to Maden et al., 1995	**Country:** England **Year(s) of data collection:** Not stated **Prison type(s):** 3 young offenders' institutions and 13 adult men's prisons **Prisoner type(s):** Various, including young offenders **Age of prisoners:** Adult & young offenders **Sex of prisoners:** Male only	**Assessment of psychiatric morbidity:** - Semi-structured interview & case note review **Sample:** - 750 prisoners (544 adult men, 206 young offenders), representing 9.4% cross-sectional sample of male unconvicted population – randomly selected	**Personality disorders:** - 84 (11%) personality disorder **Neurotic disorders:** - 192 (26%) neurotic disorder **Alcohol misuse and drug dependence:** - 285 (38%) substance misuse **Self-harm (suicidal ideation, suicide attempts and parasuicide):** - Not stated **Psychotic and affective disorders:** - 36 (5%) psychosis **General mental disorders:** - 469 (63%) psychiatric disorder

Study	Population	Methods	Key findings regarding prevalence of mental health problems among prisoners
Davidson *et al.* (1995)[37] **Study/publication type:** Journal article/ survey **Aims:** To determine the prevalence of psychiatric disorders among remand prisoners in Scotland	**Country:** Scotland **Year(s) of data collection:** 1993 **Prison type(s):** 9 institutions – 7 prisons for adult males, 1 for women, and 1 for males aged 16 to 21 **Prisoner type(s):** Remand **Age of prisoners:** Not stated **Sex of prisoners:** Male & female	**Assessment of psychiatric morbidity:** CIS **Sample:** - Initially approached 455 individuals **Response rate:** - 371 men, and 18 women (*i.e.* 389 in total) – 50% random sample at Scottish prisons	**Personality disorders:** - Not stated **Neurotic disorders:** - 10.8% anxiety **Alcohol misuse and drug dependence:** - 22.4% had alcohol-related problems - 73.2% had used illicit drugs in the past **Self-harm (suicidal ideation, suicide attempts and parasuicide):** - Not stated **Psychotic and affective disorders:** - 14.1% depression - 2.3% schizophrenia
Grubin *et al.* (1997)[47] **Study/ publication type:** Report/ survey **Aim:** Not explicitly stated **Note:** Also relates to Birmingham et al., 1996	**Country:** England **Year(s) of data collection:** 1996 **Prison type(s):** Local male remand and short term sentence prison (Durham Prison) **Prisoner type(s):** Remand prisoners **Age of prisoners:** Adults **Sex of prisoners:** Male only	**Assessment of psychiatric morbidity:** - Semi-structured interviewed designed specifically for the study **Sample:** - 569 men - All unconvicted remand prisoners seen during stage one were followed-up from their reception into prison until the end of their unconvicted remand **Response rate:** - 549 (97%) consented to be interviewed; 19 (3%) refused and 1 was unfit for interview - 528 (96%) interviews were fully completed; 21 were partly completed	**Personality disorders:** - Not stated **Neurotic disorders:** - Not stated **Alcohol misuse and drug dependence:** - 312 (57%) illicit drug use (lifetime prevalence); 33% (current) - 116 (21%) DSM-IV alcohol dependence (current) **Self-harm (suicidal ideation, suicide attempts and parasuicide):** - Not stated **Psychotic and affective disorders:** - Not stated **General mental disorders:** - 354 (62%) current psychiatric disorder - 404 (71%) lifetime psychiatric disorder **Co-occurrence of mental disorders:** - 103 (19%) suffered from mental disorder & were also abusing or dependent upon one or more substance

Table 2.2. Prevalence of Mental Disorders in Remand Prisoners (continued)

Study	Population	Methods	Key findings regarding prevalence of mental health problems among prisoners
Maden *et al.* (1995) 18 **Study/ publication type:** Report/ survey **Aim:** Not explicitly stated **Note:** Also relates to Brooke et al., 1996	**Country:** England and Wales **Year(s) of data collection:** 1993/1994 **Prison type(s):** Large and small prisons, local prisons & remand centres **Prisoner type(s):** Untried male prisoners & female remand population **Age of prisoners:** Adult & male young offenders **Sex of prisoners:** Male & female	**Assessment of psychiatric morbidity:** - Semi-structured interview **Sample:** - Point prevalence study of a stratified random sample - 544 (9.2%) of total adult male remand population, 206 male young offenders, and 245 women **Response rate:** - Not stated	**Personality disorders:** - 9.9% remanded men, 8.7% male youths, 13.5% females **Neurotic disorders:** - 15% neurosis remanded men, 8.7% male youths, 27.7% females **Alcohol misuse and drug dependence:** - 28.1% substance misuse remanded men, 21.8% male youths, 26.1% females **Self-harm (suicidal ideation, suicide attempts and parasuicide):** - Almost 30% overall had a history of one or more episodes of deliberate self-harm **Psychotic and affective disorders:** - 5.9% psychosis remanded men, 1.9% male youths, 4.5% females **General mental disorders:** - 359 men (66%), 110 male youths (53%) and 189 women (77%) given at least one psychiatric diagnosis **Co-occurrence of mental disorders:** - About one third of total sample received 2 or more diagnoses - Much of this was due to substance misuse and morbidity secondary to this, such as depression, anxiety & withdrawal phenomena
Nielssen and Misrachi, 2005 **Study/ publication type:** Journal article **Aim:** To examine the prevalence of psychotic illnesses among male prisoners in New South Wales and test the sensitivity and specificity of the CIDI-Auto psychosis screener	**Country:** Australia **Year(s) of data collection:** Not stated **Prison type(s):** Metropolitan Reception and Remand Centre in Sydney and several rural reception centres **Prisoner type(s):** Remand **Age of prisoners:** Not stated **Sex of prisoners:** Not stated	**Assessment of psychiatric morbidity:** CIDI-Auto questionnaire was administered by mental health nurses and trainee psychiatrists. Individuals giving positive answers on any of the questions/who the interviewers thought warranted further investigation to exclude psychotic illness were referred to a psychiatrist for further examination using LEAD criteria. **Sample:** 788 men received to prison during the study period **Response rate:** 60 of the above were unable/ refused to complete the CIDI-Auto.	**Personality disorders:** Not stated **Neurotic disorders:** Not stated **Alcohol misuse and drug dependence:** Not stated **Self-harm (suicidal ideation, suicide attempts and parasuicide):** Not stated **Psychotic and affective disorders:** Following clinical interviews, 42 of the 788 prisoners (5.3%) were diagnosed as having a psychotic illness. 13 other individuals were also considered to be 'possible' cases of psychotic illness – giving an overall likely prevalence of 6.9%. 11 of the men who were unable to complete the CIDI-Auto were also referred to a psychiatrist for assessment, and 7 of these were found to have psychotic illnesses. **General mental disorders:** Not stated **Co-occurrence of mental disorders:** Not stated

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Study	Population	Methods	Key findings regarding prevalence of mental health problems among prisoners
Maden *et al.* (1995) 18 **Study/ publication type:** Report/ survey **Aim:** Not explicitly stated **Note:** Also relates to Brooke et al., 1996	**Country:** England and Wales **Year(s) of data collection:** 1993/1994 **Prison type(s):** Large and small prisons, local prisons & remand centres **Prisoner type(s):** Untried male prisoners & female remand population **Age of prisoners:** Adult & male young offenders **Sex of prisoners:** Male & female	**Assessment of psychiatric morbidity:** - Semi-structured interview **Sample:** - Point prevalence study of a stratified random sample - 544 (9.2%) of total adult male remand population, 206 male young offenders, and 245 women **Response rate:** - Not stated	**Personality disorders:** - 9.9% remanded men, 8.7% male youths, 13.5% females **Neurotic disorders:** - 15% neurosis remanded men, 8.7% male youths, 27.7% females **Alcohol misuse and drug dependence:** - 28.1% substance misuse remanded men, 21.8% male youths, 26.1% females **Self-harm (suicidal ideation, suicide attempts and parasuicide):** - Almost 30% overall had a history of one or more episodes of deliberate self-harm **Psychotic and affective disorders:** - 5.9% psychosis remanded men, 1.9% male youths, 4.5% females **General mental disorders:** - 359 men (66%), 110 male youths (53%) and 189 women (77%) given at least one psychiatric diagnosis **Co-occurrence of mental disorders:** - About one third of total sample received 2 or more diagnoses - Much of this was due to substance misuse and morbidity secondary to this, such as depression, anxiety & withdrawal phenomena
Nielssen and Misrachi, 2005 **Study/ publication type:** Journal article **Aim:** To examine the prevalence of psychotic illnesses among male prisoners in New South Wales and test the sensitivity and specificity of the CIDI-Auto psychosis screener	**Country:** Australia **Year(s) of data collection:** Not stated **Prison type(s):** Metropolitan Reception and Remand Centre in Sydney and several rural reception centres **Prisoner type(s):** Remand **Age of prisoners:** Not stated **Sex of prisoners:** Not stated	**Assessment of psychiatric morbidity:** CIDI-Auto questionnaire was administered by mental health nurses and trainee psychiatrists. Individuals giving positive answers on any of the questions/who the interviewers thought warranted further investigation to exclude psychotic illness were referred to a psychiatrist for further examination using LEAD criteria. **Sample:** 788 men received to prison during the study period **Response rate:** 60 of the above were unable/ refused to complete the CIDI-Auto.	**Personality disorders:** Not stated **Neurotic disorders:** Not stated **Alcohol misuse and drug dependence:** Not stated **Self-harm (suicidal ideation, suicide attempts and parasuicide):** Not stated **Psychotic and affective disorders:** Following clinical interviews, 42 of the 788 prisoners (5.3%) were diagnosed as having a psychotic illness. 13 other individuals were also considered to be 'possible' cases of psychotic illness – giving an overall likely prevalence of 6.9%. 11 of the men who were unable to complete the CIDI-Auto were also referred to a psychiatrist for assessment, and 7 of these were found to have psychotic illnesses. **General mental disorders:** Not stated **Co-occurrence of mental disorders:** Not stated

Table 2.2. Prevalence of Mental Disorders in Remand Prisoners (continued)

Study	Population	Methods	Key findings regarding prevalence of mental health problems among prisoners
Parsons *et al.* (2001)[96] **Study/ publication type:** Journal article/ survey **Aim:** - To identify the prevalence of mental disorder in women remand prisoners at their reception into prison - To determine the proportion of this mental disorder identified by prison health screening procedures at reception	**Country:** England **Year(s) of data collection:** 1998 **Prison type(s):** 2 female remand prisons (Holloway, North London & New Hall, near Wakefield) **Prisoner type(s):** Remand prisoners **Age of prisoners:** 18 years and older **Sex of prisoners:** Female only	**Assessment of psychiatric morbidity:** - Semi-structured interview based on Birmingham *et al.* schedule **Sample:** - 428 women approached **Response rate:** - 382 (89.3%) – 3 refused to participate, further 43 completed only part of the interview	**Personality disorders:** - 45.8% personality disorder (lifetime prevalence) **Neurotic disorders:** - 30.4% anxiety disorders (lifetime prevalence) **Alcohol misuse and drug dependence:** - 1.8% substance-induced disorder (lifetime prevalence) **Self-harm (suicidal ideation, suicide attempts and parasuicide):** - Not stated **Psychotic and affective disorders:** - 9.9% schizophrenia & other psychotic disorders (lifetime prevalence) - 1.0% affective psychoses (lifetime prevalence) - 33.2% mood disorders (lifetime prevalence) **General mental disorders:** - 59% current mental disorder

Table 2.3. Prevalence of Mental Disorders in Sentenced and Remand Prisoners

Study	Population	Methods	Key findings regarding prevalence of mental health problems among prisoners
Brugha *et al*, 2005 **Study/ publication type:** Journal Article **Aim:** To estimate and compare the prevalence of psychosis in prisoners in England and Wales with the prevalence in the general UK population.	**Country:** England and Wales **Year(s) of data collection:** **Prison type(s):** **Prisoner type(s):** Remanded and Sentenced **Age of prisoners:** 16-64 years **Sex of prisoners:** Male and female **Mental disorders covered:** Psychosis	**Assessment of psychiatric morbidity:** In the community, subjects were screened using the Revised Clinical Interview Schedule, Psychosis Screening Questionnaire, and then Schedules for Clinical Assessment in Neuropsychiatry (SCAN) for those who screened positive for psychosis according to the above tools. In the prison, subjects were screened using the Revised Clinical Interviews Schedule and Psychosis Screening Questionnaire, and a 1-in-5 sub sample was selected for interview with the SCAN. **Sample:** Random sample of 3142 remanded and sentenced male and female prisoners and a two-phase cross-sectional random sample of 10,108 household residents. As detailed in Singleton et al (1998) ONS study - fixed sampling fractions: 1 in 34 male sentenced prisoners, 1 in 8 male remand prisoners, 1 in 3 women prisoners. **Interviews:** Interviewers worked in teams, with the aim of finishing all interviewing in prisons within 2 weeks. Interviewing was carried out wherever space was available but always with no other person present to ensure confidentiality **Response rates:** 12,730 adults in the general population were selected for interview, and 10,108 (79%) were interviewed using the Revised Clinical Interview Schedule and Psychosis Screening Questionnaire. 3563 prisoners were selected for interview, and interviews were actually conducted with 3142 (88%) of prisoners using the Revised Clinical Interview schedule and Psychosis Screening Questionnaire.	**Personality disorders:** Not stated **Neurotic disorders:** Not stated **Alcohol misuse and drug dependence:** Not stated **Self-harm (suicidal ideation, suicide attempts and parasuicide):** Not stated **Psychotic and affective disorders:** - The weighted prevalence of functional psychosis in the prison population was over 10 times that in the household sample – 52 per thousand in the prison population as opposed to 4.5 per thousand in the household population - The rate of probable psychosis for male remanded black African, African Caribbean and 'black other' prisoners was relatively low at 20 per thousand - "One in four prisoners with a psychotic disorder had psychotic symptoms attributed to toxic or withdrawal effects of psychoactive substances" (774) - The proportion of subjects with psychosis experiencing specific types of hallucinations/delusions did not differ between the two groups studied (774)

Study	Population	Methods	Key findings regarding prevalence of mental health problems among prisoners
Butler *et al.*, 2005 **Study/ publication type:** Journal Article **Aim:** To estimate the prevalence of mental illness among prisoners in New South Wales	**Country:** Australia **Year(s) of data collection:** 2001 **Prison type(s):** Prisoners screened at main reception centres in Sydney **Prisoner type(s):** New receptions and sentenced prisoners **Age of prisoners:** Not stated **Sex of prisoners:** Male and female **Mental disorders covered:** Neurotic disorders, psychotic and affective disorders.	**Assessment of psychiatric morbidity:** Modified version of the CIDI-Auto delivered on a laptop computer **Sample:** 953 reception inmates – 777 men and 176 women (over 30% of male and 56% of female receptions during the study period) + 579 sentenced inmates who participated in a larger Inmate Health Survey. The sentenced sample was stratified by sex, age and Aboriginality. **Interviews:** Took place in a private office within the reception area. Lasted between 45mins and 6 hours. **Response rates:** Overall response to the 2001 Inmate Health Survey was 85%	**Personality disorders:** Not stated **Neurotic disorders:** - 36% of prisoners had experienced an anxiety disorder in the previous 12 months – 38% reception and 33% sentenced; 55% women and 32% men. -The most common disorder was PTSD - diagnosed in 26% of reception prisoners and 21% of sentenced prisoners – affecting 44% of women and 20% of men. - Women were also more likely than me to experience panic disorder (17% vs. 7%) and generalised anxiety disorder (20% vs. 13%). The incidence of generalised anxiety disorder also increased with age. **Alcohol misuse and drug dependence:** Not stated **Self-harm (suicidal ideation, suicide attempts and parasuicide):** Not stated **Psychotic and affective disorders:** - Overall 9% of prisoners had experienced psychotic symptoms (due to any cause) in the previous 12 months. Psychosis was more common among reception prisoners (12%) than sentenced prisoners (5%). - Overall 20% of prisoners had suffered from at least one type of mood disorder in the previous 12 months. 23% of reception and 14% of sentenced prisoners had experienced affective disorders. - Mania was the least common mood disorder – affecting 4% of reception prisoners and 1% of sentenced prisoners - 20% of males and 14% of females suffered from depression

Table 2.3. Prevalence of Mental Disorders in Sentenced and Remand Prisoners (continued)

Study	Population	Methods	Key findings regarding prevalence of mental health problems among prisoners
Butler *et al.*, 2006 **Study/ publication type:** Journal article **Aim:** To compare the prevalence of mental health disorders in Australian prisons with those in a community sample after adjusting for demographics.	**Country:** Australia **Year(s) of data collection:** 2001 **Prison type(s):** Prisoners screened at main reception centres in Sydney **Prisoner type(s):** New receptions and sentenced prisoners **Age of prisoners:** 18-65 years **Sex of prisoners:** Male and female **Mental disorders covered:** Neurotic disorders, psychotic and affective disorders and personality disorders. Also discusses substance use disorders.	**Assessment of psychiatric morbidity:** CIDI-Auto was used to screen for anxiety, affective and substance use disorders. Screening for personality disorders was conducted using the International Personality Disorders Examination Questionnaire. Psychosis was assessed using a screener incorporated into the programme. Also used the mental health summary scale (MCS-12) and the Kessler Psychological Distress Scale (K10). **Sample:** - 953 reception inmates – 777 men and 176 women (over 30% of male and 56% of female receptions during the study period) + 579 sentenced inmates who participated in a larger Inmate Health Survey. The sentenced sample was stratified by sex, age and Aboriginality. - Community sample of 10,641 individuals included in the 1997 Australian National Survey of Mental Health and Wellbeing. **Interviews:** Took place in a private office within the reception area. Lasted between 45mins and 6 hours. **Response rates:** Overall response to the 2001 Inmate Health Survey was 85%	**Personality disorders:** - Crude prevalence figures for personality disorder (any type) were 43.1% for prisoners, and 7.5% for the community sample. - Cluster B personality disorder was the most prevalent in the prison population – affecting 30.9% of the sample, whilst cluster C personality disorder was the most prevalent in the community – affecting 5.3% of the sample. **Neurotic disorders:** - Crude figures for anxiety disorders are as follows: - Panic disorder – 9.1% prisoners, 2.9% community sample - Agoraphobia – 3.1% prisoners, 1.8% community sample - Social phobia – 1.3% prisoners, 3.6% community sample - GAD – 15.1% prisoners, 6.2% community sample - OCD – 2.7% prisoners, 0.6% community sample - PTSD – 25.6% prisoners, 4.2% community sample * When weighted, all of these figures are lower in the community sample **Alcohol misuse and drug dependence:** - 66% of prisoners and 18% of the community sample (weighted) were diagnosed with a substance use disorder. - Figures for specific substances are as follows: - Alcohol use – 21.6% prisoners, 8.1% community (13.9% when weighted) - Opioid use – 39.5% prisoners, 0.3% community sample (0.4% when weighted) - Cannabis use – 22.1% prisoners, 2.1% community sample (7.1% when weighted) - Sedative use – 14.7% prisoners, 0.5% community sample (both weighted and crude) - Stimulant use – 34.3% prisoners, 0.3#% community (1.4% when weighted). **Self-harm (suicidal ideation, suicide attempts and parasuicide):** Not stated **Psychotic and affective disorders:** - Psychoses was diagnosed in 7% of the prison sample, and 0.6% of the community sample - Crude figures for depression are 17.5% for prisoners and 8.8% for the community sample - Dysthymia affected 7.6% of prisoners and 1.7% of the community sample - Bipolar disorder affected 3.5% of prisoners and 0.6% of the community sample

Study	Population	Methods	Key findings regarding prevalence of mental health problems among prisoners
Coid *et al.*, 2003a **Study/ publication type:** Journal Article **Aim:** To investigate psychiatric morbidity among prisoners who report having received disciplinary segregation	**Country:** England and Wales **Year(s) of data collection:** 1997 – as part of Singleton *et al.,*1998 study **Prison type(s):** All prisons (131 open at the time fieldwork commenced), including young offender institutions, closed prisons (local and training) and open prisons **Prisoner type(s):** Convicted/sentenced and on remand (convicted but unsentenced and unconvicted/unsentenced), plus fine defaulters, and civil prisoners (e.g. immigration detainees and this prison for contempt of court) **Age of prisoners:** 16-64 **Sex of prisoners:** Male and female **Mental disorders covered:** Schizophrenia, schizotypal and delusional disorders (ICD-10: F20-29), mood (affective) disorders (F30-39), neurotic and stress-related disorders (F40-48) and personality disorders (F60-69). Data also collected on alcohol and illicit drug use, self-harm and intellectual functioning. Organic eating and sexual disorders were excluded.	**Assessment of psychiatric morbidity:** - Clinical interviews used for personality disorder (Structured Clinical Interview for DSM-IV/SCID-II) and psychotic disorder (Schedules for Clinical Assessment in Neuropsychiatry/SCAN) - Lay interviews- used for neurotic disorder (Clinical Interview Schedule – Revised/CIS-R), self-harm (suicide attempts and ideation – 5 questions based on Paykel et al.,2 questions about other self-harm in the current prison term), post-traumatic stress (questions based on the ICD-10 diagnostic criteria for research), alcohol misuse (Alcohol Use Disorders Identification Test/AUDIT), drug dependence (5 questions taken from the ECA study), and intellectual functioning (QUICK test) **Sample:** Singleton *et al.,* 1998 study sample = 1,121 males and 584 females – national random sample. Fixed sampling fractions: 1 in 34 male sentenced prisoners, 1 in 8 male remand prisoners, 1 in 3 women prisoners. This study concentrated on those who reported having received disciplinary segregation – 763 individuals (24%) of prisoners. **Interviews:** Interviewers worked in teams, with the aim of finishing all interviewing in prisons within 2 weeks. Interviewing was carried out wherever space was available but always with no other person present to ensure confidentiality **Response rates:** - All 131 prison establishments open at the time field work commenced participated - Response rates ranged from 100% in several prisons to 57% (1 prison) - 3563 prisoners were selected to take part in the initial stage and 3142 (88%) were interviewed; a further 37 agreed to take part but failed to complete the long interview. - Only 198 prisoners (6%) refused an interview, 53 (1%) were unable to participate, mainly because of language difficulties; interviewers were unable to contact 118 prisoners (3%); interviewers were advised not to see 15 prisoners - At the follow-up stage, 505 (76%) of the 661 prisoners selected for follow-up were interviewed, 105 people (16%) could not be contacted and a further 50 (8%) refused	**Personality disorders:** Not stated **Neurotic disorders:** Not stated **Alcohol misuse and drug dependence:** Not stated **Self-harm (suicidal ideation, suicide attempts and parasuicide):** Not stated **Psychotic and affective disorders:** Not stated N.B.this paper provides odds ratios to compare the groups rather than reporting overall prevalence rates

Table 2.3. Prevalence of Mental Disorders in Sentenced and Remand Prisoners (continued)

Study	Population	Methods	Key findings regarding prevalence of mental health problems among prisoners
Coid *et al.*, (2003b) **Study/ publication type:** Journal article **Aim:** To examine psychiatric morbidity in a sample of prisoners who report having been placed in special cells	**Country:** England and Wales **Year(s) of data collection:** 1997 – as part of Singleton *et al.,* (1998) study **Prison type(s):** All prisons (131 open at the time fieldwork commenced), including young offender institutions, closed prisons (local and training), and open prisons **Prisoner type(s):** Prisoners who stated that they had been placed in special cells – convicted/sentenced and on remand (convicted but unsentenced and unconvicted/ unsentenced), plus fine defaulters, and civil prisoners (e.g. immigration detainees and this prison for contempt of court) **Age of prisoners:** 16-64 **Sex of prisoners:** Male and female **Mental disorders covered:** Schizophrenia, schizotypal and delusional disorders (ICD-10: F20-29), mood (affective) disorders (F30-39), neurotic and stress-related disorders (F40-48) and personality disorders (F60-69). Data also collected on alcohol and illicit drug use, self-harm and intellectual functioning. Organic, eating and sexual disorders were excluded.	**Assessment of psychiatric morbidity:** - Clinical Interviews used for personality disorder (Structured Clinical Interview for DSM-IV/SCID-II) and psychotic disorder (Schedules for Clinical Assessment in Neuropsychiatry/ SCAN) - Lay interviews used for neurotic disorder (Clinical Interview Schedule – Revised/CIS-R), self-harm (suicide attempts and ideation – 5 questions based on Paykel *et al.,*2 questions about other self-harm in the current prison term), post-traumatic stress (questions based on the ICD-10 diagnostic criteria for research), alcohol misuse(Alcohol Use Disorders Identification Test/AUDIT), drug dependence (5 questions taken from the ECA study), and intellectual functioning (QUICK test) **Sample:** 357 prisoners who answered 'yes' they had been placed in special 'strip' cells during the Singleton *et al.,* (1998) study. **Interviews:** Interviewers worked in teams, with the aim of finishing all interviewing in prisons within 2 weeks. Interviewing was carried out wherever space was available but always with no other person present to ensure confidentiality **Response rates:** See Singleton *et al.,* (1998) for overall response rates. Not given for the specific group discussed in this paper.	**Personality disorders:** Not stated **Neurotic disorders:** Not stated **Alcohol misuse and drug dependence:** Not stated **Self-harm (suicidal ideation, suicide attempts and parasuicide):** Not stated **Psychotic and affective disorders:** Not stated **Co-occurrence of mental disorders:** Not stated N.B.this paper provides odds ratios to compare the groups rather than reporting overall prevalence rates

Study	Population	Methods	Key findings regarding prevalence of mental health problems among prisoners
Fotiadou *et al.*, 2006 **Study/ publication type:** Journal article **Aim:** To examine the prevalence of current and lifetime mental disorders and deliberate self-harm among male prisoners in Greece	**Country:** Greece **Year(s) of data collection:** Not stated **Prison type(s):** Komotini male remand and sentence prison in Northern Greece **Prisoner type(s):** Remand and sentenced **Age of prisoners:** 21-74 years **Sex of prisoners:** Male **Mental disorders covered:** Antisocial personality disorder, neurotic disorders, psychotic and affective disorders. Also collected information on alcohol and drug misuse, intellectual functioning and deliberate self-harm.	**Assessment of psychiatric morbidity:** - Mini International Neuropsychiatric Interview (MINI) was used to assess prisoners for mental disorder, including suicidality and substance misuse. - Also collected data re: contact with psychiatric services, physical health, intellectual functioning and previous deliberate self-harm **Sample:** 80 randomly selected prisoners (from a total prison population of 180). Prisoners who were unable to speak Greek were excluded. **Interviews:** Conducted by three researchers with clinical backgrounds. The research took place over 2 months. One researcher collected demographic data, one measured psychopathology, and the third measured intellectual functioning. **Response rates:** 54 prisoners were excluded during random sampling as they did not speak Greek well enough to participate in the study. 14 prisoners declined to participate.	**Personality disorders:** - The lifetime prevalence rate of antisocial personality disorder was 37.5% **Neurotic disorders:** - Anxiety and somatoform disorders were diagnosed in 30 (37.5%) of prisoners (including symptoms of panic disorder, agoraphobia, social phobia, obsessive compulsive disorder and PTSD) - The lifetime prevalence rate of panic disorder was 18.7% **Alcohol misuse and drug dependence:** - 21 prisoners (26.3%) were diagnosed with alcohol dependence - 22 prisoners (27.5%) were diagnosed with opiate dependence **Self-harm (suicidal ideation, suicide attempts and parasuicide):** - 15% of prisoners reported deliberate self-harm prior to imprisonment - 2.5% of prisoners reported deliberate self-harm during imprisonment **Psychotic and affective disorders:** - Current schizophrenia was diagnosed in 3.75% of prisoners, and the lifetime prevalence rate was also 3.75% - Bipolar disorder was diagnosed in 2.5% of prisoners, and the lifetime prevalence rate was 7.5% - Dysthymia was diagnosed in 6.25% of prisoners - Major depression was diagnosed in 22 (27.5%) of prisoners

Table 2.3. Prevalence of Mental Disorders in Sentenced and Remand Prisoners (continued)

Study	Population	Methods	Key findings regarding prevalence of mental health problems among prisoners
Lader, Singleton and Meltzer, 2003 **Study/ publication type:** Journal article based on data from the Singleton *et al.,* 1998 study **Aim:** To investigate the prevalence of mental health disorder among young offenders in England and Wales	**Country:** England and Wales **Year(s) of data collection:** 1997 **Prison type(s):** All prisons (131 open at the time fieldwork commenced), including young offender institutions, closed prisons (local and training), open prisons **Prisoner type(s):** Convicted/sentenced and on remand (convicted but unsentenced and unconvicted/ unsentenced), plus fine defaulters, and civil prisoners (e.g. immigration detainees and this prison for contempt of court) **Age of prisoners:** 16-20 years **Sex of prisoners:** Male and female **Mental disorders covered:** Schizophrenia, schizotypal and delusional disorders (ICD-10: F20-29), mood (affective) disorders (F30-39), neurotic and stress-related disorders (F40-48) and personality disorders (F60-69). Data also collected on alcohol and illicit drug use, self-harm and intellectual functioning. Organic, eating and sexual disorders were excluded.	**Assessment of psychiatric morbidity:** - Clinical interviews used for personality disorder (Structured Clinical Interview for DSM-IV/ SCID-II) and psychotic disorder (Schedules for Clinical Assessment in Neuropsychiatry/SCAN) - Lay interviews used for neurotic disorder (Clinical Interview Schedule – Revised/CIS-R), self-harm (suicide attempts and ideation – 5 questions based on Paykel *et al.* 2 questions about other self-harm in the current prison term), post-traumatic stress (questions based on the ICD-10 diagnostic criteria for research), alcohol misuse (Alcohol Use Disorders Identification Test/AUDIT), drug dependence (5 questions taken from the ECA study), and intellectual functioning (QUICK test) **Sample:** - 1,121 males and 584 females – national random sample - Fixed sampling fractions: 1 in 34 male sentenced prisoners, 1 in 8 male remand prisoners and 1 in 3 female prisoners - This paper reports on findings for the part of the overall sample who were aged 16-20 years – 590 young offenders **Interviews:** - Interviewers worked in teams, with the aim of finishing all interviewing in prisons within 2 weeks - Interviewing was carried out wherever space was available but always with no other person to ensure confidentiality	**Personality disorders:** - Clinical interviews showed that the prevalence of any personality disorder was 84% for male remand and 88% for male sentenced young offenders. - The most prevalent kind of personality disorder was antisocial – affecting 76% of male remand and 81% of male sentenced young offenders undergoing clinical interviews - Paranoid personality disorder was found in 26% of male remand and 22% of male sentenced young offenders **Neurotic disorders:** - 41% of the sentenced male and 67% of the female sample had a CIS-R score of 12+ - 52% of male remand and 41% of male sentenced young offenders had scores on or above the CIS-R score threshold of 12 **Alcohol misuse and drug dependence:** - 62% of male remand, 70% of male sentenced and 51% of female sentenced young offenders had a score of 8+ on the AUDIT indicating hazardous drinking in the year before coming to prison - 30% of male remand, 24% of male sentenced and 26% of female sentenced young offenders had used heroin in the year before coming to prison - Two fifths of female sentenced young offenders stated that they had used drugs during their current prison term. This figure was over a third of male remand and almost half of male sentenced young offenders. - 52% of male sentenced, 58% of female sentenced and 57% of male remand prisoners reported a measure of dependence on drugs in the year before prison. - 23% of female sentenced, 21% of male remand and 15% of male sentenced prisoners reported dependence on opiates either alone or with dependence on stimulants

		Response rates - All 131 prison establishments open at the time fieldwork commenced participated - Response rates ranged from 100% in several prisons to 57% (1 prison) - 3563 prisoners were selected to take part in the initial stage and 3142 (88%) were interviewed; a further 37 agreed to take part but failed to complete the long interview - Only 198 prisoners (6%) refused an interview, 53 (1%) were unable to participate, mainly because of language difficulties; interviewers were unable to contact 118 prisoners (3%); interviewers were advised not to see 15 prisoners - At the follow-up stage, 505 (76%) of the 661 prisoners selected for follow-up were interviewed, 105 people (16%) could not be contacted and a further 50 (8%) refused - 632 young offenders were selected to take part in the overall study, and interviews were achieved with 590 (93%) of these	**Self-harm (suicidal ideation, suicide attempts and parasuicide):** - Male remand young offenders – 38% had thought of suicide in their lifetime, 30% in the past year, 10% in the week prior to interview, and 20% had attempted suicide at some point in their life. Of these, 17% had attempted suicide in the year before interview, and 3% in the previous week. - Female sentenced young offenders – 33% had attempted suicide in their lifetime - Remand prisoners were more likely to have had suicidal thoughts/ attempted suicide than their sentenced counterparts - 7% of male remand young offenders had engaged in self-harm - 11% of female sentenced young offenders had engaged in self-harm **Psychotic and affective disorders:** - Of those young offenders undergoing clinical interviews, 10% of male sentenced and 8% of male remand young offenders had experienced functional psychosis (of any kind) in the past year - Lay interviews identified 9% of female sentenced prisoners as probably having a psychotic disorder compared with 6% of male remand and 4% of male sentenced young offenders

Table 2.3. Prevalence of Mental Disorders in Sentenced and Remand Prisoners (continued)

Study	Population	Methods	Key findings regarding prevalence of mental health problems among prisoners
O'Brien *et al.*, 2003 **Study/publication type:** Journal Article **Aim:** To outline results of the ONS Survey of Psychiatric Morbidity among Prisoners in England and Wales for women.	**Country:** England and Wales **Year(s) of data collection:** 1997 **Prison type(s):** All prisons (131 open at the time fieldwork commenced), including young offender institutions, closed prisons (local and training), open prisons **Prisoner type(s):** Convicted/sentenced and on remand (convicted but unsentenced and unconvicted/ unsentenced), plus fine defaulters, and civil prisoners (*e.g.* immigration detainees and this prison for contempt of court) **Age of prisoners:** 16-64 **Sex of prisoners:** Female **Mental disorders covered:** Neurosis, personality disorder, psychotic disorder. Also issues of alcohol and drug dependence + comorbidity.	**Assessment of psychiatric morbidity:** - Clinical interviews used for personality disorder (Structured Clinical Interview for DSM-IV/SCID-II) and psychotic disorder (Schedules for Clinical Assessment in Neuropsychiatry/SCAN) - Lay interviews used for neurotic disorder (Clinical Interview Schedule – Revised/CIS-R), self-harm (suicide attempts and ideation – 5 questions based on Paykel *et al.*; 2 questions about other self-harm in the current prison term), post-traumatic stress (questions based on the ICD-10 diagnostic criteria for research), alcohol misuse (Alcohol Use Disorders Identification Test/AUDIT), drug dependence (5 questions taken from the ECA study), and intellectual functioning (QUICK test) **Sample:** 894 women were asked to participate in the study – women were over-sampled as part of Singleton *et al.,* study to allow sufficient numbers for separate analysis of their answers. **Interviews:** - Interviewers worked in teams, with the aim of finishing all interviewing in prisons within 2 weeks - Interviewing was carried out wherever space was available but always with no other person present to ensure confidentiality **Response rates:** Interviews were achieved with 771 (86%) of the 894 female prisoners who were asked to participate in the study.	**Personality disorders:** - 50% of women having a clinical interview had a personality disorder – 31% of women having a clinical interview were assessed as having antisocial personality disorder, 20% were assessed as having borderline personality disorder, and 16% as having paranoid personality disorder. - The prevalence of personality disorder decreased with age. **Neurotic disorders:** - 65% of the sample scored 12+ on the CIS-R for neurotic symptoms, and women on remand had higher scores than sentenced women. - Overall prevalence for any neurotic disorder was 66% of the overall sample group **Alcohol misuse and drug dependence:** - 38% of women were scored as a hazardous drinker in the year before coming to prison on the AUDIT scale. The prevalence decreased as age increased. - 54% of remand prisoners and 41% of sentenced prisoners reported drug dependence in the year before coming into prison. - 40% of remand prisoners and 23% of sentenced prisoners reported dependence on heroin in the year before coming to prison - 23% of remand prisoners and 14% of sentenced prisoners reported dependence on crack cocaine in the year before coming into prison. - Prevalence of drug use was higher in the younger age group. **Self-harm (suicidal ideation, suicide attempts and parasuicide):** - 23% of remand prisoners had thought of suicide in the week prior to interview - Just over a quarter of remand prisoners had attempted suicide in the year before interview - 9% of remand, and 10% of sentenced female prisoners reported deliberate self-harm without suicidal intent during their current prison term, and this was more common among white women than black women. **Psychotic and affective disorders:** - Clinical interview data suggested that the prevalence rate of functional psychosis was 14% for female prisoners - Schizophrenic or delusional disorders were identified in 13% of the sample - Severe affective disorders were identified in 2% of the sample - Prevalence rates for probable psychotic disorder were three times higher amongst women who had been held in stripped cells than those who had not

Study	Population	Methods	Key findings regarding prevalence of mental health problems among prisoners

Rotter *et al.*, 2002
 	
Study/ publication type:
Journal article
 	
Aim:
To investigate the prevalence of personality disorders on New York State prison mental health services caseloads
	Country:
	USA
	
	Year(s) of data collection:
	2001
	
	Prison type(s):
	State prisons covered by the State Office of Mental Health Central New York Psychiatric Centre
	
	Prisoner type(s):
	Inmates in state prison, and individuals in county jails awaiting trial.
	
	Age of prisoners:
	Not stated
	
	Sex of prisoners:
	Male and female
	
	Mental disorders covered:
	Personality disorders
		Assessment of psychiatric morbidity:
		Studied inpatient and outpatient admission records for all inmates on the State Office of Mental Health Central New York Psychiatric Centre caseload as of 8/1/01 – covering all admission histories for the previous 5 years.
		
		Sample:
		159 inpatients and 7383 outpatients
		
		Interviews:
		N/A
		
		Response rates:
		N/A
			Personality disorders:
			- 36% of the inpatient population at the Central New York Psychiatric Centre (CNYPC) had a primary or secondary diagnosis of personality disorder. In terms of the overall study population, this was broken down as follows:
			  ○ 26.4% antisocial
			  ○ 3.1% borderline
			  ○ 4.4% NOS
			  ○ 2.5% other
			- 21% (n=1552) of the CNYPC outpatients had a personality disorder diagnosis. In terms of the overall study population, this were broken down as follows:
			  ○ 13.9% antisocial
			  ○ 2.1% borderline
			  ○ 4% NOS
			  ○ 1.1% other
			- In terms of the study population who have PD, 69% have antisocial, 10% borderline, 19% NOS and 5% other
			- In terms of the 'other' category in the outpatient group, the most frequent personality disorders were paranoid (27.3%, n=24) and schizoid (13.6%, n=12)
			
			Neurotic disorders:
			Not stated
			
			Alcohol misuse and drug dependence:
			Not stated
			
			Self-harm (suicidal ideation, suicide attempts and parasuicide):
			Not stated
			
			Psychotic and affective disorders:
			Not stated

Table 2.3. Prevalence of Mental Disorders in Sentenced and Remand Prisoners (continued)

Study	Population	Methods	Key findings regarding prevalence of mental health problems among prisoners
Singleton *et al.* (1998)[1] **Study/ publication type:** ONS Survey **Aim:** - To collect baseline data on the mental health of male & female, remand & sentenced prisoners in order to inform general policy decisions - To estimate the prevalence of psychiatric morbidity according to diagnostic category among the prison population of England & Wales - To examine the varying use of services & the receipt of care in relation to mental disorders, & relate these to psychiatric symptoms & disorders - To establish key, current & lifetime factors which may be associated with mental disorders of prisoners	**Country:** England and Wales **Year(s) of data collection:** 1997 **Prison type(s):** All prisons (131 open at the time fieldwork commenced), including young offender institutions, closed prisons (local and training), open prisons **Prisoner type(s):** Convicted/sentenced and on remand (convicted but unsentenced and unconvicted/unsentenced), plus fine defaulters, and civil prisoners (*e.g.* immigration detainees and this prison for contempt of court) **Age of prisoners:** 16-64 **Sex of prisoners:** Male and female **Mental disorders covered:** Schizophrenia, schizotypical and delusional disorders (ICD-10: F20-29), mood (affective) disorders (F30-39), neurotic and stress-related disorders (F40-48) and personality disorders (F60-69). Data also collected on alcohol and illicit drug use, self-harm and intellectual functioning. Organic, eating and sexual disorders were excluded.	**Assessment of psychiatric morbidity:** - Clinical interviews used for personality disorder (Structured Clinical Interview for DSM-IV/SCID-II) and psychotic disorder (Schedules for Clinical Assessment in Neuropsychiatry/SCAN) - Lay interviews used for neurotic disorder (Clinical Interview Schedule – Revised/CIS-R), self-harm (suicide attempts and ideation – 5 questions based on Paykel *et al.*; 2 questions about other self-harm in the current prison term), post-traumatic stress (questions based on the ICD-10 diagnostic criteria for research), alcohol misuse (Alcohol Use Disorders Identification Test/ AUDIT), drug dependence (5 questions taken from the ECA study), and intellectual functioning (QUICK test) **Sample:** - National random sample - Fixed sampling fractions: 1 in 34 male sentenced prisoners, 1 in 8 male remand prisoners, 1 in 3 women prisoners **Interviews:** - Interviewers worked in teams, with the aim of finishing all interviewing in prisons within 2 weeks - Interviewing was carried out wherever space was available but always with no other person present to ensure confidentiality **Response rates:** - All 131 prison establishments open at the time fieldwork commenced participated - Response rates ranged from 100% in several prisons to 57% (1 prison) - 3563 prisoners were selected to take part in the initial stage and 3142 (88%) were interviewed; a further 37 agreed to take part but failed to complete the long interview Only 198 prisoners (6%) refused an interview, 53 (1%) were unable to participate, mainly because of language difficulties; interviewers were unable to contact 118 prisoners (3%); interviewers advised not to see 15 prisoners - At the follow-up stage, 505 (76%) of the 661 prisoners selected for follow-up were interviewed; 105 people (16%) could not be contacted and a further 50 (8%) refused	**Personality disorders:** - 78% male remand prisoners; 50% female remand prisoners - 64% male sentenced & 50% female sentenced prisoners - Antisocial personality had highest prevalence (*e.g.* 63% of male remand prisoners), followed by paranoid personality disorder (29% male remand) - Highest rates of personality disorder found in younger age groups **Neurotic disorders:** - 59% male remand prisoners; 76% female remand prisoners - 40% male sentenced & 63% female sentenced prisoners - Overall CIS-R scores of prisoners were considerably higher than for the general population - Remand prisoners had higher total CIS-R scores than sentenced (*e.g.* 58% male and 75% female remand prisoners had scores on or above the threshold of 12) - Women consistently had higher scores **Alcohol misuse and drug dependence:** - 43% male remand prisoners; 52% female remand prisoners drug dependency - 30% male remand prisoners; 20% female remand prisoners alcohol dependency - 30% male sentenced & 19% female sentenced prisoners – alcohol dependence - 34% male sentenced & 36% female sentenced prisoners – drug dependence - 58% remand and 63% sentenced white male prisoners had an AUDIT score of 8 or more, cf 36% and 39% respectively for women - Higher AUDIT scores in Whites - One-quarter of female remand prisoners and one third of female sentenced prisoners used drugs during their current prison term **Self-harm (suicidal ideation, suicide attempts and parasuicide):** - 15% male remand prisoners; 27% female remand prisoners attempted suicide in the last year - 9% male remand prisoners; 13% female remand prisoners self-harm (current prison term) - 7% male sentenced & 16% female sentenced prisoners – suicide attempt in last year - 7% male sentenced & 10% female sentenced prisoners – self-harm current prison term - 2% of male remand prisoners had attempted suicide the previous week - Women reported higher rates of suicidal rates - Rates for parasuicide ranged from 5% for male remand prisoners to 10% for female sentenced prisoners - Whites generally reported higher rates of self-harm

			Psychotic and affective disorders: - 9% male remand prisoners; 13% female remand prisoners any schizophrenic or delusional disorder - 2% male remand prisoners; 2% female remand prisoners affective psychosis - 6% male sentenced & 13% female sentenced prisoners – any schizophrenic or delusional disorder - 1% male sentenced & 2% female sentenced prisoners – affective psychosis - Schizophrenia or delusional disorders were more common in all sample groups - Proportion of female remand sample identified as probably having a psychotic disorder was very high (21%) cf 9% for male remand - Larger proportion of Whites showed evidenced of probable psychosis **Co-occurrence of mental disorders:** - 9 out of every 10 prisoners have at least one of five disorders - 12-15% of sentences prisoners have 4 or 5 - High proportion has evidence of multiple disorders - Only 1 in 10 or fewer showed no evidence of any of the five above disorders - No more than 2 in 10 had only one disorder - Rates for multiple disorders were higher among remand than sentenced prisoners - 22% of male (27% of female) remand prisoners showed evidence of 4 or 5 disorders compared with only 14% of male (19% of female) sentenced prisoners

Table 2.3. Prevalence of Mental Disorders in Sentenced and Remand Prisoners (continued)

Study	Population	Methods	Key findings regarding prevalence of mental health problems among prisoners
Tye and Mullen 2006 **Study/ publication type:** Journal article **Aim:** To investigate the 12 month prevalence rates of mental disorders among female prisoners in Victoria compared to community rates	**Country:** Australia **Year(s) of data collection:** 2000 **Prison type(s):** 2 women's prisons in Victoria – HMP Tarrengower and the Metropolitan Women's Correctional Centre **Prisoner type(s):** Sentenced and Remand **Age of prisoners:** Not stated **Sex of prisoners:** Female **Mental disorders covered:** Anxiety disorders, personality disorders, psychotic and affective disorders and drug-related disorders.	**Assessment of psychiatric morbidity:** - Composite International Diagnostic Interview (CIDI) - Adapted version of the Personality Diagnostic Questionnaire (PDQ-4+) **Sample:** - 103 female prisoners in Victoria's two women's prisons - Comparison group of women selected from the Australian Bureau of Statistics Australian National Mental Health Study database (all females in this database were included). **Interviews:** Conducted by experienced forensic mental health professionals from Thomas Embling Hospital. **Response rates:** A midnight census identified a population of 181 women, of whom 49 were excluded due to: insufficient English to complete the interview, being in management cells at the time of the interview, being transferred to hospital, being transferred/released prior to interview. This left a total available population of 132, and of these 103 women agreed to participate in the study – 78% response rate.	**Personality disorders:** - Overall, 43% of the prison sample was diagnosed with personality disorders - 33% of the prison sample was diagnosed with paranoid PD - 26% of the prison sample was diagnosed with borderline PD - 6% of the prison sample was diagnosed with histrionic PD - 30% of the prison sample was diagnosed with antisocial PD - 12% of the prison sample was diagnosed with narcissistic PD **Neurotic disorders:** - 52% of the prison sample was diagnosed with anxiety disorders - 36% of the prison sample was diagnosed with PTSD - 21% of the prison sample was diagnosed with GAD - 12% of the prison sample was diagnosed with social phobia - 11% of the prison sample was diagnosed with agoraphobia - 2% of the prison sample was diagnosed with OCD **Alcohol misuse and drug dependence:** - Overall, 63% of the prison sample was diagnosed with drug-related disorders - 12% of the prison sample was diagnosed with alcohol dependence - 2% were diagnosed with harmful alcohol use - 57% were diagnosed with drug use disorder **Self-harm (suicidal ideation, suicide attempts and parasuicide):** Not stated **Psychotic and affective disorders:** - 24% of the prison sample was diagnosed with psychosis - 4% of the prison sample was diagnosed with bipolar disorder - 45% of the prison sample was diagnosed with depressive disorders - 44% of the prison sample was diagnosed with major depression - 13% of the prison sample was diagnosed with dysthymia **N.B.** All of the above are 12-month prevalence rates

Table 2.4. Prevalence of Mental Disorders Among British Sentenced and Remand Prisoners

	SENTENCED		REMAND	
Mental health disorder	**Prevalence % Male**	**Prevalence % Female**	**Prevalence % Male**	**Prevalence % Female**
Personality disorder	64	50	78	50
Neurotic disorders (*e.g.* phobia, anxiety)	40	63	59	76
Drug dependence (opiates, stimulants or both)	34	36	43	52
Alcohol dependence (measured as AUDIT score of 30 or more)	30	19	30	20
Suicide attempt in last year	7	16	15	27
Any schizophrenic or delusional disorder	6	13	9	13
Self harm (not suicide attempt) during current prison term	7	10	5	9
Affective psychosis	1	2	2	2

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