Health Technology Assessment 2010; Vol. 14: No. 18

A systematic review of outcome measures used in forensic mental health research with consensus panel opinion

R Fitzpatrick, J Chambers, T Burns, H Doll, S Fazel, C Jenkinson, A Kaur, M Knapp, L Sutton and J Yiend

March 2010
10.3310/hta14180

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A systematic review of outcome measures used in forensic mental health research with consensus panel opinion

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Declared competing interests of authors: none

Published March 2010
10.3310/hta14180

This report should be referenced as follows:

Fitzpatrick R, Chambers J, Burns T, Doll H, Fazel S, Jenkinson C, *et al.* A systematic review of outcome measures used in forensic mental health research with consensus panel opinion. *Health Technol Assess* 2010;**14**(18).

Health Technology Assessment is indexed and abstracted in *Index Medicus*/MEDLINE, *Excerpta Medica*/EMBASE, *Science Citation Index Expanded* (*SciSearch*®) and *Current Contents*®/Clinical Medicine.

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The research reported in this issue of the journal was commissioned by the National Coordinating Centre for Research Methodology (NCCRM), and was formally transferred to the HTA programme in April 2007 under the newly established NIHR Methodology Panel. The HTA programme project number is 06/91/11. The contractual start date was in January 2006. The draft report began editorial review in July 2009 and was accepted for publication in July 2009. The commissioning brief was devised by the NCCRM who specified the research question and study design. The authors have been wholly responsible for all data collection, analysis and interpretation, and for writing up their work. The HTA editors and publisher have tried to ensure the accuracy of the authors' report and would like to thank the referees for their constructive comments on the draft document. However, they do not accept liability for damages or losses arising from material published in this report.

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ISSN 1366-5278

Published by Prepress Projects Ltd, Perth, Scotland (www.prepress-projects.co.uk), on behalf of NETSCC, HTA.

Printed on acid-free paper in the UK by the Charlesworth Group. MR

Abstract

A systematic review of outcome measures used in forensic mental health research with consensus panel opinion

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Objective: To describe and assess outcome measures in forensic mental health research, through a structured review and a consensus panel.

Data sources: A search of eight electronic databases, including CINAHL, EMBASE and MEDLINE, was conducted for the period 1990–2006.

Review methods: In the structured review, search and medical subject heading terms focused upon two factors: the use of a forensic participant sample and the experimental designs likely to be used for outcome measurement. Data extraction included general information about the identity of the reference, specific information regarding the study and information pertaining to the outcome measures used. The consensus exercise was implemented in two stages. At the first stage, participants were asked to complete ratings about the importance of various potential areas of outcome measurement in a written consultation. At the second stage, they were asked to attend a consensus meeting to review and agree results relating to the domains, to consider and rate specific outcome instruments identified as commonly used from the structured review and to discuss strengths, weaknesses and future priorities for outcome measurement in forensic mental health research.

Results: The final sample of eligible studies for inclusion in the review consisted of 308 separate studies obtained from 302 references. The consensus group agreed on 11 domains of forensic mental health outcome measurement, all of which were considered important. Nine different outcome measure instruments were used in more than four different studies. The most frequently used outcome measure was used in 15 studies. According to the consensus group, many domains beyond recidivism and mental health were important but under-represented in the review of outcomes. Current instruments that may show future promise in outcome measurement included risk assessment tools. The outcome measure of repeat offending behaviour was by far the most frequently used, occurring in 72% of the studies included in the review. Its measurement varied with position in the criminal justice system, offence specification and method of measurement. The consensus group believed that recidivism is only an indication of the amount of antisocial acts that are committed.

Conclusions: A wide range of domains are relevant to assessing outcomes of interventions in forensic mental health services. Evaluations need to take account of public safety, but also clinical, rehabilitation and humanitarian outcomes. Recidivism is a very high priority; the public expects interventions that will reduce future criminal behaviour. Greater attention needs to be given to validity of measurement, given the enormous variety of approaches to measurement. More research is needed on methods to take account of the heterogeneity of seriousness of forms of recidivism in outcome measurement. Validity of self-report instruments regarding recidivism also needs examination by further research. Mental health is clearly also an important dimension of outcome. The review provides clear support for the view that domains such as quality of life, social function and psychosocial adjustment have not been extensively employed in forensic mental health research, but are relevant and important issues. The role of such instruments needs more consideration.

Contents

List of abbreviations vii

Executive summary ix

1 Introduction 1

2 Methods 3
Research objectives and overview of strategy 3
Stage 1: structured review 3
Stage 2: consensus group methodology 5

3 Results 9
Analysis of the robustness of the results 9
Properties of the 308 studies included in the structured review 9
Outcome measurement results 13
Addiction Severity Index 17
Beck Depression Inventory 18
Brief Psychiatric Rating Scale 19
Child Behavior Checklist 21
Conflict Tactics Scale 22
Family Adaptability and Cohesion Evaluation Scale 23
Revised Behavior Problem Checklist 24
Symptom-Checklist-90-Revised 25
Self-Reported Delinquency Scale 27
Summary of most frequently used outcome measures 28
Consensus opinion about the most frequent outcomes 28
The outcome measure of recidivism 29

4 Discussion 33

5 Conclusions and recommendations 37

Acknowledgements 39

References 41

Appendix 1 Search strategies by database 47

Appendix 2 Data extraction form 51

Appendix 3 Included studies reference list 57

Health Technology Assessment reports published to date 69

Health Technology Assessment programme 91

List of abbreviations

ASI	Addiction Severity Index
BDI	Beck Depression Inventory
BPRS	Brief Psychiatric Rating Scale
CBCL	Child Behavior Checklist
CTS	Conflict Tactics Scale
DSM	*Diagnostic and Statistical Manual of Mental Disorders*
FACES	Family Adaptability and Cohesion Evaluation Scales
HCR-20	Historical, Clinical and Risk Management Scales
MeSH	medical subject heading
MMPI	Minnesota Multiphasic Personality Inventory
RBPC	Revised Behavior Problem Checklist
RCT	randomised controlled trial
SCL-90-R	Symptom-Checklist-90-Revised
SRDS	Self-Reported Delinquency Scale

All abbreviations that have been used in this report are listed here unless the abbreviation is well known (e.g. NHS), or it has been used only once, or it is a non-standard abbreviation used only in figures/tables/appendices, in which case the abbreviation is defined in the figure legend or in the notes at the end of the table.

Executive summary

Introduction

This study examines outcome measurement in forensic mental health research. Forensic mental health services cover many domains such as prisons, community corrections and secure forensic hospitals. Within this complex system each service uses outcome measures for its own specific objectives, with little standardisation between organisations. Outcome measurement is also difficult to standardise as the client population often suffers from multiple problems including mental health disorders and substance abuse, leading to multiple targets for intervention. Research in forensic mental health also suffers problems such as a moving population, priorities to maintain security and duty of care to clients, preventing extensive application of studies based on randomised controlled trials. Overall, there is very little methodological discussion about outcome measurement in forensic mental health research.

Objectives

This research project was exploratory in nature, to describe and assess outcome measures in forensic mental health research. A two-stage study was conducted. Stage one consisted of a structured review of outcome measures used in forensic mental health research. Stage two consisted of a consensus panel that considered the essential domains of outcome measurement in forensic mental health and then assessed the properties of the most frequently used outcome measures against key questions. The panel included experts from within forensic mental health research and services.

Methods

Structured review

A search of eight electronic databases, including CINAHL, EMBASE and MEDLINE, was conducted for the period 1990–2006. Search and medical subject heading terms focused upon two factors: the use of a forensic participant sample and the experimental designs likely to be used for outcome measurement.

Studies eligible for inclusion in the review fulfilled several criteria:

1. Participants were defined as offenders or residents of a forensic mental health institution.
2. The study required examination of an intervention with the use of outcome measurement after the intervention.
3. Study design was required to be either a randomised controlled trial or a quasi-experimental (comparing intervention and control) design with a minimum follow-up of 6 months.
4. A mental health element needed to be present in the participant population, the intervention or an outcome measurement.

Data extraction included general information about the identity of the reference, specific information regarding the study and information pertaining to the outcome measures used.

Data about mental health research outcome measures were extracted from the included references, and were entered into EXCEL. The outcome measures that occurred most frequently were also calculated.

Consensus group

The consensus exercise was implemented in two stages. At the first stage, participants were asked to complete ratings about the importance of various potential areas of outcome measurement ('domains') in a written consultation. At the second stage, they were asked to attend a consensus meeting to review and agree results relating to the domains, to consider and rate specific outcome instruments identified as commonly used from the structured review and to discuss strengths, weaknesses and future priorities for outcome measurement in forensic mental health research. Participants comprised three representatives from psychology, three from psychiatry and one from each of criminology, probation, prison health and nursing.

Results

The final sample of eligible studies for inclusion in the review consisted of 308 separate studies obtained from 302 references.

The consensus group agreed on 11 domains of forensic mental health outcome measurement, all of which were considered important. In the literature review, 1038 distinct variables were identified that were used to assess outcomes in the sample of evaluative studies. Nine different outcome measure instruments were used in more than four different studies. The most frequently used outcome measure was used in 15 studies. A further review of research concerning the psychometric properties of these instruments was carried out. It revealed little evidence specifically to validate their use with forensic populations. The measures that were rated most favourably by the consensus panel were the Beck Depression Inventory, the Brief Psychiatric Rating Scale and the Symptom Checklist-90-Revised. According to the consensus group, many domains beyond recidivism and mental health were important but under-represented in the review of outcomes. Current instruments that may show future promise in outcome measurement included risk assessment tools.

The outcome measure of repeat offending behaviour was by far the most frequently used, occurring in 72% of the studies included in the review. Its measurement varied with position in the criminal justice system, offence specification and method of measurement. The consensus group believed that recidivism is only an indication of the amount of antisocial acts that are committed.

Conclusions and recommendations

A wide range of domains are relevant to assessing outcomes of interventions in forensic mental health services. Evaluations need to take account of public safety, but also clinical, rehabilitation and humanitarian outcomes. To date, research has focused extensively on the first domain, evaluating outcomes in terms of recidivism.

Recidivism is a very high priority; the public expects interventions that will reduce future criminal behaviour. Greater attention needs to be given to validity of measurement, given the enormous variety of approaches to measurement. More research is needed on methods to take account of the heterogeneity of seriousness of forms of recidivism in outcome measurement. Validity of self-report instruments regarding recidivism also needs examination by further research.

Mental health is clearly also an important dimension of outcome. Instruments have been used in forensic mental health research that have been well validated in the context of general mental health research.

The review provides clear support for the view that domains such as quality of life, social function and psychosocial adjustment have not been extensively employed in forensic mental health research, but are relevant and important issues. The role of such instruments needs more consideration. Research is needed in these domains to complement the evidence base of outcomes in terms of public safety and mental health.

The wide array and diversity of measures used in forensic mental health research suggests that there is still substantial scope for standardisation, by further use of consensus-type processes to identify domains and specific measures that are relevant to and familiar in practice and can be more widely used in evaluative research.

The role of instruments assessing dynamic aspects of the risk of violence offer a particular opportunity. They are becoming more widely known in practice and could be more widely used in evaluative research in this field.

Chapter 1
Introduction

The purpose of this study was to examine and assess the range of outcome measures used in forensic mental health research. Currently, there is little agreement about which outcome measures to use in this context. This may reflect the diversity of forensic mental health services as well as reflecting the very broad range of problems experienced by users. Forensic mental health services are very varied, operating in settings as diverse as probation services in the community system and secure forensic hospitals. Services may also be assessed in terms of very diverse goals including clinical, humanitarian, legal and public safety.[1] The specific assessments used by different agencies are also not routine, with agency-specific requirements dictating the use of measures for relevant outcomes.[2] This diversity across agencies means that a standard battery of outcome measures has not developed.[3] In addition, forensic mental health service clients present with multiple problems. For example, personality disorder, mental illness, learning disability, substance abuse and offending behaviour are a few of the possible problems, often occurring together, leading to numerous intervention targets and consequently many combinations of potentially relevant outcomes.[4]

It is not only the large variety of services that forensic mental health encompasses that has affected the standardisation of outcome measurement; there are also significant difficulties inherent in researching forensic mental health populations. Research in forensic mental health has suffered logistical problems, with users often moving through different custodial settings (e.g. remand – prison – probation). Security considerations may have priority over research needs. Practical difficulties with researching forensic populations may be partly responsible for the relative lack of randomised controlled trials (RCTs) in the UK.[2]

The problems noted above may result in a lack of clear consensus about outcome measures for use in evaluating interventions. A concern expressed in the broader field of mental health research has been that too many different outcome measures have been introduced, with too few receiving proper evaluation, leading to the use of unvalidated outcome measurement.[5,6] It has been suggested that, in the broader field of research in mental health, even if time and effort is invested to produce studies of robust design, unvalidated outcome measurement can weaken the value of results.[6]

A prime example of the difficulties of assessing outcome in forensic mental health research is the commonly used assessment of recidivism. A meta-analysis of recidivism in sexual offenders showed that not only were several different measures used (reconviction, arrest, self-report, parole violation), but that they came from several different sources (national criminal justice records, local records, records from treatment programmes and self-report).[7] The diversity of sources for assessing recidivism makes standardisation difficult.[8] A method used to increase the validity of reporting recidivism is multisource recording. For example, The MacArthur Violence Risk Assessment Study measured violence from three sources: self-report, collateral informant report and official agency records.[9] Also, careful development of self-report instruments can lead to high concurrent validity with court records.[10] Thus, whilst the outcome measurement of repeat offending is fraught with problems for valid measurement between different studies, there are strategies that may be employed to make measurement more robust.

The aim of the current study was to conduct a structured review of forensic mental health outcome measures, to identify and, where possible, assess more frequently used outcome measures. This review considered studies that have assessed outcomes within an evaluative study design such as RCTs, or comparative studies with longitudinal observation of groups and a reasonable follow-up period (discussed below).

Elsewhere in health-care research, the body of information about the use of outcome measurement is burgeoning. A good example of a field in which consensus regarding outcome measurement in research and practice has emerged is in relation to musculo-skeletal disorders where a concerted international consensus process, OMERACT (Outcome Measures in Rheumatology),

has delineated methods for agreement about core measures and use of outcomes in practice as well as in research.[11] This consensus process involves:

1. harnessing expert views
2. agreeing key domains of outcome and criteria for assessing evidence
3. applying criteria in systematic reviews
4. identifying sets of preferred outcome measures relevant to a range of applications
5. an ongoing programme of work to test measurement outcome.

OMERACT has focused on three basic criteria for outcome measures: validity, discrimination and feasibility, using consensus processes to interpret emerging research evidence. On a more modest scale, the current study includes the use of consensus processes to launch a process towards consensus in outcome measurement in forensic mental health research. In this study expert opinion about the domains of outcome measurement in forensic mental health were sought. This process was then complemented through assessment of the most frequently used outcome measures from forensic mental health research, gleaned from the structured review, for the criteria of psychometric properties, feasibility and relevance. Thus, we provided expert opinion about all of the different areas of outcome measurement that should be fulfilled and opinion about the measures that have most frequently been used.

In summary, forensic mental health outcome measurement has suffered many barriers to identification of optimal outcome measurement in research, including multi-agency involvement, difficulties for conducting research in a context that may have to prioritise security, and a proliferation of unvalidated measures. In the current study we assessed outcome measures that have been used in previous research in a structured review. Literature pertaining to the most frequently used outcome measures was gathered for information regarding their psychometric properties. We accessed expert opinion about the domains that are pertinent to forensic mental health that require validated outcome measurement. These domains were then assessed according to the outcome measures used in previous research from the studies found in the structured review. Finally, the experts provided opinion about the most frequently used outcome measures from the structured review to assess the validity, feasibility and relevance of measures that have been used in previous research. This assessment of previous use of outcome measurement led to discussion about priorities for future research.

Chapter 2
Methods

Research objectives and overview of strategy

As has been discussed, this research project was exploratory in nature: (1) to identify outcome measures in use in forensic mental health research, (2) to explore and agree domains of outcome relevant to research in forensic mental health and (3) to assess outcome measures in terms of available evidence and consensus views. To fulfil these aims, a two-stage study was conducted. Stage one consisted of a structured review of outcome measures used in forensic mental health research. Stage two consisted of a consensus panel that considered the essential domains of outcome measurement in forensic mental health and then assessed the properties of the most frequently used outcome measures against key questions. The panel included experts from within forensic mental health research and services. In practice, there was overlap in the timing of aspects of the two stages, with some interdependency of work. For example, practicalities of a 1-year project meant that the consensus panel had to meet before all results of the systematic review were completed. Conversely, an initial consultation with the panel by correspondence provided a classification of domains that was helpful to both the literature review and the consensus meeting. As a result, in parts of this report, description of results moves back and forth between the two pieces of work.

Stage 1: structured review

The methods used in the structured review were considered at length by both the researchers who worked on the project on a day-to-day basis and also by the research team who met on a monthly basis. This process enabled researchers with experience in database searches and those with forensic psychology and psychiatry expertise to contribute to the methodology.

Search inclusion

The structured review was conducted to capture publications from within a set time-frame: 1990–2006 inclusive. The cut-off date for inclusion of emerging articles published during 2006 was November 2006. Only published references were included in the review to ensure that some level of peer review had been undertaken and that studies were available in the public domain; this excluded dissertations.

The databases searched were:

- CINAHL (Cumulative Index to Nursing and Allied Health Literature)
- EMBASE
- MEDLINE (1990 to October 2006)
- National Criminal Justice Reference Service (NCJRS)
- PsycINFO
- Sociological Abstracts
- The Cochrane Database
- The Patient-reported Health Instruments (PHI) website.

Search results from each of the databases were amalgamated into the reference software program REFERENCE MANAGER. Once all of the references from each of the databases had been uploaded into REFERENCE MANAGER, a duplicate search was conducted. A duplicate search is necessary as many of the different databases reference the same articles when searched using similar criteria. Once a database that consisted of unique references was constructed, examination of the abstracts began for identification of eligible references for the review. Abstracts were identified as eligible according to the parameters described below. Those abstracts that appeared eligible for the review were marked for collection of a hard copy of the reference. The reference hard copies underwent a final more thorough eligibility analysis and, if eligible, underwent data extraction.

Search strategy

The purpose of this review was to collect data about the most frequently used outcome measures in forensic mental health research. In essence, the purpose of an outcome measure is to measure change after an intervention. The search terms used to fulfil the aim of this project were focused upon two different factors: the use of a forensic

mental health sample and study designs likely to be used for outcome measurement. Both keyword dictionaries and Medical Subject Heading terms (MeSH) were utilised in the search strategy. The MeSH terms are a pre-designated topic classification system applied to all papers included in each database. Use of MeSH terms for each of the databases widens the scope of only a keyword search by considering categorised references. The keyword search that we employed assessed the presence of a forensic sample population and particular experimental designs.

Forensic participant population

The keyword search strategy was constructed to identify participants involved within the criminal justice system through both the terms used to identify an offender and institutions were they might be detained. An earlier strategy identifying the offence types that the participants might have committed (e.g. burglary, rape) was rejected because of a substantial number of irrelevant results. Use of offender and institution terms identified the participant sample descriptions in the abstracts of the references. Search terms included community corrections, parolee, probationer, prisoner, youth custody and forensic unit/hospital (see Appendix 1 for a full listing of search keywords and MeSH terms utilised for each database). By considering the forensic element of sample populations for the search strategy, the researchers were later able to identify specific mental health elements within the population, intervention or outcome measure from the collated reference abstracts.

Experimental design

The search strategy was designed to capture experimental (randomised) or quasi-experimental study designs. The experimental design search included terms such as repeated measures, randomised and longitudinal (see Appendix 1 for a full listing of search keywords utilised for each database).

Studies included in the review

Identification and assessment of studies for inclusion occurred at two stages: first, using the abstracts recovered from the databases; second, with the hard copy of the reference. This two-stage process enabled studies that appeared to be relevant to undergo stringent assessment of eligibility, discarding clearly irrelevant studies at an early stage. There were several elements that a reference had to fulfil to be eligible for inclusion.

Firstly, participants in studies must be offenders, defined as: any individual under the supervision of the criminal justice system including community correction clients, parolees, correctional clients, probationers or youthful offender system residents. In addition, references where the participants resided in a forensic mental health institution were also included as they are highly pertinent to forensic mental health research. Residence in a forensic mental health institution did not necessarily mean that the participant had been convicted. They may have been unfit to stand trial, or were sectioned into a forensic mental health institution owing to dangerousness.

Second, the study was required to investigate an intervention, enabling the measurement of change, thus the use of outcome measures. The intervention was required to be an experimental activity that would not usually fall within day-to-day activities. This criterion omitted longitudinal and cohort studies that predicted offending behaviour due to naturalistic social variables such as level of peer/parental support or socioeconomic status. Another essential element of outcome measurement is assessment of change measured both before and after the intervention. Thus, repeated measures were a requirement of study eligibility. This requirement was subsequently relaxed for some variables, assessing outcomes in a retrospective fashion only, e.g. measures of service experience or satisfaction.

The researchers wished to include studies with a robust design. The 'gold standard' of experimental design is an RCT. Therefore all studies that were RCTs were included. An RCT was identified by the participants being randomly selected into either the experimental or a control condition. The control condition may have been either another intervention or a control group (i.e. placebo/waitlist). However, it was felt that exclusive focus on RCTs might be too restrictive of the range of outcome measures in common use, given the under-developed nature of experimental research in some areas of forensic mental health. Hence studies with quasi-experimental and similar controlled study designs were included. A requirement was stipulated that quasi-experimental studies had a minimum follow-up of 6 months with longitudinal measurement.

The element of mental health

The final criterion for study eligibility was the presence of mental health as a key issue. The search strategy was focused on forensic participants

only, with the element of mental health being too theoretically complex to isolate at the search level. The focus on a forensic sample meant that references were excluded that did not possess a mental health element, for example, a sample of prisoners completing a horticultural course in an effort to reduce recidivism. The mental health element was required to be present in one of three ways: (1) the participating study sample or institution, (2) the intervention or (3) the outcome measure. Occurrence of mental health was required in only one of these three for the study to be included, but usually it occurred in more than one. For mental health to be present in the participant sample or institution, the sample required a mental health theme such as diagnosis of a psychiatric or personality disorder, or subjects to be residing in or attending a forensic mental health institution. For forensic mental health to be present in the intervention it must target either a psychological or a psychiatric mechanism; for example, cognitive behavioural therapy to reduce violent behaviour and anger would fulfil this requirement. Finally, for mental health to be present in the outcome measure it must measure a mental health element, such as depression.

Studies excluded from the review

Several types of study were assessed as not eligible for inclusion into the review. There are many areas of forensic mental health research that do not explicitly concern outcome measurement. These alternative areas of research include reduction of risk in populations that would be prone to offending through resilience factors; the assessment of risk within an offender population; and victimology. These types of study also did not tend to use repeated measures or to include identified interventions, thus were often ineligible for several reasons.

The inclusion of references that used only an offender sample meant that victim samples and 'at risk' samples that had not yet offended were excluded. For example, a study may examine a community intervention for drug addicts as they are at high risk of offending, and the outcome measure may be offending behaviour. This study would not be included as the participants were not offenders at recruitment into the project. If a reference did report a non-offender sample in addition to an offender sample, then the data were required to be distinctly separate for the two different populations, with only the offender sample included for data extraction.

Interventions that were solely focused on physical health issues were also excluded. Thus, interventions such as those designed to reduce risky behaviours that might lead to contraction of AIDS or hepatitis were excluded if they did not target mental health as a component.

Data extraction

Once a reference had undergone all of the eligibility checks and was considered eligible for inclusion into the structured review, data were extracted. Data extraction included general information about the identity of the reference, specific information regarding the study and information pertaining to the outcome measures used. Reference identity data included the type of report, name of the author, year of publication and country of origin. Information regarding the study included type of study design, study setting, sample size, age of participants, participant criminal history, participant psychiatric diagnosis, participant learning disability diagnosis and type of intervention. Outcome measure data consisted of the name of each outcome measure, and the longest follow-up period for outcome measurement for each measure. If the outcome measure was recidivism or criminal behaviour then additional information in the form of the type of recidivism (i.e. arrest, charges, conviction, etc.) was extracted (see Appendix 2 for the data extraction form).

Stage 2: consensus group methodology

Overview

The consensus exercise was implemented in two stages. At the first stage, participants were asked to complete ratings about the importance of various potential areas of outcome measurement ('domains'). This first stage was carried out by written correspondence. At the second stage, they were asked to attend a consensus meeting to review and agree results relating to the domains, to consider and rate specific outcome instruments identified as commonly used from the structured review, and to discuss strengths, weaknesses and future priorities for outcome measurement in forensic mental health research.

Participants

The target sample was weighted to reflect the relative contributions of different professions within forensic mental health. It comprised three representatives from psychology, three from psychiatry and one from each of the fields of criminology, probation, prison health and nursing. A target sample of three stakeholders or service users was set for participation in the domain rating phase only. Final participant numbers for each part of the exercise are shown in *Table 1*. The group comprised a mix of senior and experienced practitioners, academics and researchers. Examples of participants' backgrounds and experience included a senior mental health nurse with experience of training and research in risk assessment prediction instruments in forensic contexts; a professor of psychiatry with extensive research experience in interventions and outcomes for dangerous personality disorder in a range of secure settings; a consultant clinical psychologist practising in secure settings with extensive experience of services for men and women with records of violent behaviour; and a professor of forensic clinical psychology with broad research experience of offender behaviour programmes.

Procedure

Domain ratings

Participants were sent a rating form with an inclusive list of domains and asked to rate their relative importance for forensic mental health research. Potential domains for rating were identified based on the results of the structured review. Ratings were made on a Likert scale comprising 1 (not important), 2 (less important), 3 (important), 4 (very important) and 5 (essential). 'Important' was specified as 'how important is it that this domain of measurement is included in future research?'. Participants were asked to list using free text any areas they considered important that had been omitted from the list. Replies were collated and results summarised for presentation at a consensus meeting.

Consensus meeting

For reasons of practicality, some attendees were recruited after the domain rating exercise so that not all experts participated in both stages of the process.

The meeting lasted for a whole working day. It was structured into three discrete sections. First, participants were shown the mean ratings and final rank order of domains obtained at the first stage from written correspondence. This was followed by a period of unstructured discussion of these results.

Next, individual instruments were presented in turn for rating, selected on the basis of their frequency of occurrence (five or more occurrences) within the structured literature review of forensic mental outcome assessment conducted in stage one of the project. The content, format and supporting evidence for each instrument were briefly presented to the group before encouraging participants to consult a more detailed written summary prepared by the team and provided before the meeting. Copies of instruments themselves were made available during the meeting. Each instrument was rated by members of the meeting using a booklet constructed for the purpose and containing a brief synopsis of the available psychometric data.

TABLE 1 *Numbers of individuals participating in the consensus exercise*

Profession	Target number	Number approached	Number completing domain ratings	Number attending consensus meeting
Psychiatry	3	7	3	1
Psychology	3	5	4	4
Prison health	1	2	1	1
Nursing	1	2	1	1
Probation	1	1	1	1
Criminology	1	3	1	0
Stakeholders	3	6	2	0
Total	**13**	**26**	**13**	**8**

Participants were asked to identify whether each instrument was familiar to them (yes/no) and then to rate it on three scales:

1. relevance and appropriateness
2. feasibility of use
3. adequacy of measurement properties (e.g. reliability, validity, responsiveness and based on the information provided at the meeting).

All scales comprised 1 (not), 2 (slightly), 3 (fairly), 4 (very) and 5 (extremely).

Finally, the group participated in an unstructured discussion concerning recidivism. Participants were subsequently sent a draft report to confirm whether views had been adequately captured.

Chapter 3
Results

Analysis of the robustness of the results

Figure 1 displays the generation of the eligible studies included in the structured review. As described in the method section there were two levels of inspection of the reference list generated from the electronic database search, including examination of the abstracts and then the hard copies. After duplicate reference removal there were 10,703 references for examination. Ten per cent of these references from the electronic database search were deemed suitable for further examination of the hard copies. Every 100th abstract was collected for inter-rater reliability to test agreement about hard copy collection of the reference paper. Agreement between pairs of raters was high at 91.8%. Of the 1272 references marked for hard copy collection, 1075 (84.5%) were retrieved in the time available. Of these hard copy references, fewer than one-third were finally found eligible for inclusion in the review after more rigorous examination of the methodology. The 302 eligible references reported 308 separate studies for inclusion in the review (see Appendix 3 for a complete list of the references included in the review).

Properties of the 308 studies included in the structured review

Owing to the inclusion of published studies in the review, the majority of studies were sourced from journals (*Table 2*).

The most frequent country of origin of studies included in the review was the USA, producing nearly three-quarters of the studies (*Table 3*).

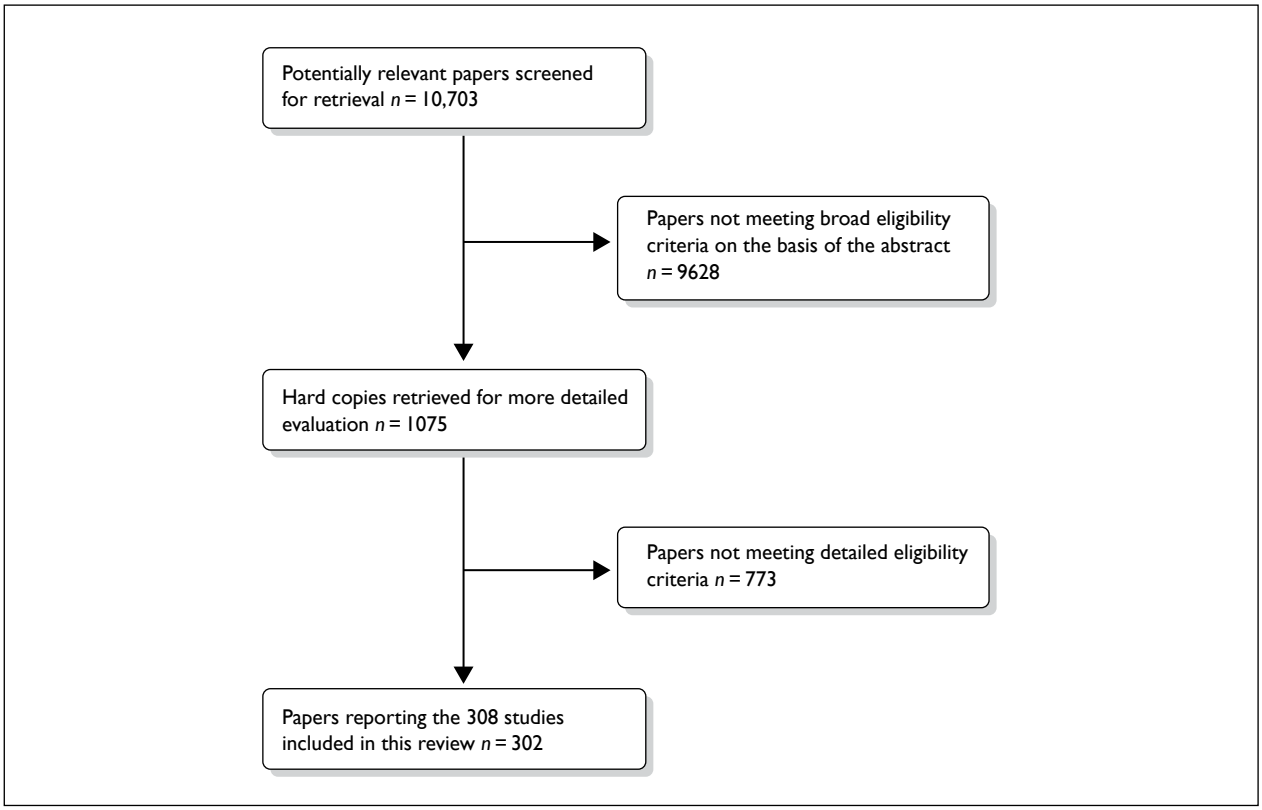

FIGURE 1 *Retrieved studies flow chart (number of hard copies retrieved from those identified?).*

TABLE 2 *Type of report*

Report type	*n*	%
Journal article	293	95.1
Government report	9	2.9
Book/chapter	3	1.0
Non-profit research institute report	2	0.6
Conference proceeding	1	0.3

TABLE 3 *Country of publication*

Country of publication	*n*	%
USA	223	72.4
UK and Ireland	34	11.0
Canada	20	6.5
Other European	15	4.9
Australia/New Zealand	9	2.9
Middle East/Asia	6	1.9
Africa	1	0.3

TABLE 4 *Study design*

Study design	*n*	%
Randomised controlled trial	140	45.5
Cohort study	85	27.6
Other comparative design	83	26.9

This may be due to the trend of more robust experimental design used in the USA, enabled by large correctional facilities.

Nearly half of the studies included in the review were RCTs (*Table 4*). The rest of the study designs were similarly spread across cohort and comparative study designs. These results reveal that the number of included studies doubled through inclusion of study types other than RCTs. Cross tabulation of the study design and country of origin revealed that significantly more RCTs occurred in the US than in any other region, $\chi^2(12, n = 308) = 39.0, p < 0.001$.

Most studies were set in the community (*Table 5*). The proportion of community-based studies (48.1%) was nearly matched by the proportion of studies set within an institution (43.5%), including prison, secure forensic hospital, juvenile centre and remand. Half of the institutional studies were set in adult prisons, where most of the participants were serving a sentence for a conviction rather than being on remand. Considering the forensic mental health target of the study, it is of interest that only 11% of the included studies were conducted within secure forensic hospitals. This low percentage of forensic hospital location suggests that the majority of forensic mental health research considers the mental health of the general offender population rather than the mentally disordered offender population.

The sample size of the included studies displayed a peak at 101–200, with a curved distribution weighted towards the lower sample size, with a shallow curve for the larger sample sizes (*Table 6*). The largest sample was 65,390, which was considerably larger than even the next largest sample size of 4072. The largest study sample size distorted the mean sample size considerably to 487, which would have been 276 without its inclusion.

About two-thirds of the included studies consisted of an adult sample, and about one-third an

TABLE 5 *Study setting*

Study setting	*n*	%
Community	148	48.1
Prison	65	21.1
Secure forensic hospital	34	11.0
Juvenile centre	31	10.1
Other	18	5.8
Therapeutic community	8	2.6
Remand	4	1.3

TABLE 6 *Sample size*

Number of subjects	*n*	%
1–50	54	17.5
51–100	62	20.1
101–200	72	23.4
201–300	42	13.6
301–400	22	7.1
401–500	20	6.5
501–750	21	6.8
750–5000	14	4.5
>5000	1	0.3

TABLE 7 *Participant age*

Age	Adolescent (*n*)	Adolescent (%)	Adult (*n*)	Adult (%)
Yes	102	33.1	206	66.9
No	193	62.7	90	29.2
Not stated	13	4.2	12	3.9

TABLE 8 *Participant gender*

Gender	*n*	%
Male subjects	132	42.9
Female subjects	10	3.2
Mixed	130	42.2
Not stated	36	11.7

adolescent sample, with the cut-off age of 18 years (*Table 7*). The inclusion of adult or adolescent samples was not mutually exclusive, with nine studies including both adults and adolescents. The distribution of studies including adolescents and adults reflects the trend of research concerning early intervention with young offenders.

The majority of included studies consisted of a male only sample (*Table 8*). The prevalence of a male only sample was closely followed by a mixed sample. However, only two of the mixed sample studies consisted of more female than male participants, with 59% of the mixed samples consisting of at least 75% male participants.

TABLE 9 *Criminal history of participants*

Criminal history	*n*	%
Any offence/felony/offence type not stated	204	66.2
Drug offence/use	66	21.4
Sexual offence	46	14.9
Domestic violence	19	6.2
Violent offence	9	2.9
Other	7	2.3

The criminal history sample characteristics included each offence type identified by a study as being the principle source of data (*Table 9*). For example, the study title of a paper 'Long-term treatment and management of violent tendencies of men with intellectual disabilities convicted of assault' clearly defines the participant sample as having an assault conviction, thus would be coded as a violent offence. Many studies did not specify the offence history of participants for inclusion and used a general offender sample such as prisoners in general. The general offence category consisted of two-thirds of the studies included in the review. Studies that included participants with a specific criminal history included drug offenders, sexual offenders, domestic violence offenders and violent offenders. The criminal history relevant to the participant sample was also not mutually exclusive. For example, some studies used both violent and sexual offenders, which was scored as a presence of both types of offence. Within the specific offence types, drug offenders were the most prevalent, followed by sexual offenders. For violent offences, those that were specified as domestic violence were totalled separately to those that specified general violence such as assault. The two violent offence types are of interest as there were over twice as many studies that specifically considered domestic violence rather than other types of violence. This result reflects the proliferation of domestic abuse programmes that may be assumed to be easily studied.

Similar to the criminal history variables of the sample, the psychiatric diagnosis of the participants was noted wherever there was an explicit description. As can be seen in *Table 10*, only a minority of studies provided an explicit description of mental health characteristics of the sample. Even in this group, a non-specific description was used such as 'mental illness'. In this group, six studies specified participants who were not guilty by reason of insanity and six specified participants who were detained under the Mental Health Act 1983. Substance abuse was the other explicit psychiatric specification where participants had been diagnosed, usually by the *Diagnostic and Statistical Manual of Mental Disorders* (DSM) criteria. Finally, four studies explicitly specified disorders including personality, affective, sexual and behavioural.

By far the most frequent type of intervention was cognitive behavioural, designed to reduce offending behaviour (*Table 11*). Therapeutic communities were the next most frequent intervention explored by the included studies. Other interventions occurred in less than 10% of

TABLE 10 *Psychiatric diagnosis of participants*

Psychiatric history	*n*	%
Mental illness	35	15.6
Of which not guilty by reason of insanity	6	1.9
Of which detained under the Mental Health Act 1983	6	1.9
Substance abuse	20	6.5
Other	11	3.6
Personality disorder	5	1.6
Affective disorder	3	1.0
Sexual disorder	2	0.6
Behaviour disorder	2	0.6

TABLE 11 *Type of intervention*

Intervention	*n*	%
Cognitive/behavioural	121	39.3
Therapeutic community	39	12.7
Community supervision/aftercare/mental health services	29	9.4
Multisystemic therapy	20	6.5
Forensic psychiatric unit/high security hospital	16	5.2
Drug court	14	4.5
Alternative therapy	10	3.2
Family therapy	9	2.9
Jail diversion	9	2.9
Other	8	2.6
Case management	6	1.9
Foster family care	6	1.9
Mental health court	6	1.9
Medical drug treatment	6	1.9
Node link mapping	5	1.6
Treatment need assessment/assignment	4	1.3

the included studies. Psychiatric interventions such as mental health aftercare/community care and forensic psychiatric units were both under 10% prevalence. Drug court, jail diversion and mental health courts (together consisting of 10.3% of included studies) are all implemented to prevent jail admission through attempts to tackle the core problems of the offenders rather than using incarceration. Family lifestyle interventions such as foster family care, multisystemic therapy and family therapy were interventions targeted at young offenders in an attempt to create resilience from further offending behaviour by altering their home environments. The family-oriented interventions also reflect the trend in sample age where one-third of the studies involved adolescent participants. Treatment provision oriented interventions such as case management and matching treatment need with assessment both occurred in less than 2% of studies. Node link mapping, also occurring in under 2% of included studies, was a new type of therapy strategy. Finally, the use of medical drug interventions was quite low at 1.9% prevalence.

Outcome measurement results

This section considers the subject of outcome measures found in the current survey of forensic mental health research. Information from both the structured review and consensus panel will be used to assess outcomes. First, the issue of domains of outcome measurement for forensic mental health research will be considered. Second, the properties of the most frequently occurring outcome measurement instruments from the review will be examined, with reference to their properties for use in forensic populations. This evidence about most frequently occurring measures was also assessed by the consensus panel, and their ratings and views will be reported. Finally, this section will give particular attention to the outcome measure of recidivism, from the patterns extrapolated from the review to the opinions of the consensus panel.

Domains of outcome measurement

Consensus domain decisions

Domains: ratings

The consensus panel was asked in written correspondence to consider a draft of potential domains of outcome in forensic mental health research. Mean ratings of importance of domains of outcome for forensic mental health research are given in *Table 12*, listed in rank order. No significant additional domains were identified in comments received and none were dropped as being redundant.

Domains: group discussion

When the consensus panel came together the group was invited to review the quantitative scores previously assigned to domains in written ratings (*Table 12*). The group did not wish to revise their scores for importance of domains. All 11 domains were considered important (all having received mean ratings of 3 or more). There was universal agreement that recidivism is one of the most important outcomes. Death, suicide and violent recidivism were seen as outcomes consequent upon a failure to identify early warning signals captured within lower ranked domains (e.g. engagement, social functioning). This view suggests that lower domains should be given relatively greater priority for measurement as a way of preventing the most negative outcomes from occurring.

Some more specific points were made. It was noted that employment would be better described as 'meaningful activity' as many forensic mental health service users never or rarely work. There was surprise that physical health was ranked the least important domain, given growing concerns around low uptake of health services within forensic mental health service users. Association with criminal peers was noted as a potentially important outcome not captured specifically by any domain. The literature suggests it is one of the best predictors of criminality (in addition to previous convictions), particularly in the case of persistent offenders. The list of domains was endorsed as appropriate.

It was felt that the relative importance of domains is contextual and depends on factors such as:

1. The question being asked by the study.
2. The population being studied.
3. The perspective (e.g. society at large versus the individual service user).

Structured review classification of outcome measures into consensus-specified domains

The 308 studies in this review included 1038 separate variables treated as outcomes, of which 450 were instruments in the sense of scales or

TABLE 12 *Rank order of importance of domains of outcome for forensic mental health research according to importance ratings made by consensus group*

Domains	Description	Mean[a]	IQR
Recidivism: violent	Reoffending, violent and sexual	4.6	1
Suicide		4.5	1
Substance abuse	Being addicted, e.g. to alcohol, drugs	4.1	1
Recidivism: non-violent	Reoffending in some way other than violent or sexual	4.0	2
Mental state	General psychological well-being	4.0	2
Engagement with treatment		3.9	2
Relationships	With family, friends, etc.	3.8	2
Aggression	Verbal or physical	3.8	2
Cognitive/psychological function	Planning, remembering, problem solving	3.8	1.25
Death		3.8	2.25
Self-harm		3.8	2
Service outcomes	How much someone uses national services	3.7	1
Compliance	Adherence; concordance	3.5	1
Stages of change/readiness	Willingness and motivation to change selves/situation	3.5	1
Economic	Costs/pay back to society (e.g. service use, working)	3.5	1
Social function	Day-to-day activities that involve contact with people	3.3	1
Quality of life		3.2	1
Self-esteem	How good someone feels about themselves	3.2	2
Employment		3.2	1
Satisfaction with treatment		3.1	2
Physical health		3.0	2

IQR, interquartile range.
a Scale ranges from not important (1) to essential (5), with 3 and above indicating 'important'.

TABLE 13 *Frequency of use of variables and instruments in different domains of outcome in forensic mental health research*

Domain	Total number of different variables and instruments	Number of instruments
Recidivism: non-violent	314	45
Substance abuse	133	73
Service outcomes	99	13
Recidivism: violent or sexual	80	20
Mental state	74	65
Cognitive/psychological function	74	71
Relationships	41	35
Compliance	31	13
Economic	30	2
Satisfaction with services	25	24
Social function	20	13
Physical health	14	11
Employment	13	5
Engagement with treatment	8	6
Aggression	8	7
Stage of change/readiness	7	7
Quality of life	6	6
Suicide	5	3
Self-esteem	4	4
Death	2	0
Other	50	27

multiple item questionnaires. The outcome variables and instruments were classified according to the domains identified as important by the consensus panel (*Table 13*). As can be seen, the majority of variables and of outcome instruments could be adequately described by the classificatory schema for domains.

Non-violent recidivism was assessed through 314 different variables. This variety reflects the diversity of studies, including different stages in the criminal justice process, different types of offence and different types of activity or event considered as recidivism. Examples of non-violent recidivism include illegal activities in the past 90 days, number of months until rearrest, new charge for a property offence and time before first conviction. Violent recidivism displayed less diversity with 80 different methods of measurement and a larger proportion recorded by means of formal instruments (25.0%).

The next largest variety of variables to assess an outcome is in substance abuse, with 133 distinguishable variables, of which just over half comprised instruments (54.9%). Many of the remaining domains comprised variables where 75% or more were formal instruments, for example, mental state, engagement with treatment, relationships, aggression, cognitive/psychological function, stages of change/readiness, quality of life, self-esteem, satisfaction with treatment and physical health. Variables outside the domains identified by the expert panel are grouped together as 'other' and include accommodation, sexual behaviour and victimisation.

Properties of the most frequently occurring outcome measure instruments

Further investigation of more commonly used outcome measure instruments was undertaken. Each outcome measure instrument that appeared in more than four separate studies was isolated for further examination. The cut-off of five or more uses was arbitrary, but allowed the research group to focus on a manageable number of outcome measures used with reasonable frequency in

TABLE 14 *Frequency of occurrence of outcome measures*

Outcome measure	Number of times occurred
Addiction Severity Index	15
Symptom-Checklist-90-Revised (SCL-90-R) and precursor and part measures: SCL-90-R; SCL-90; Hopkins Symptom Checklist; Brief Symptom Inventory; Global Severity Index[a]	15 (4; 3; 3; 3; 4)
Self-Reported Delinquency Scale	11
Beck Depression Inventory	7
Conflict Tactics Scale	7
Revised Behavior Problem Checklist	6
Brief Psychiatric Rating Scale	5
Child Behavior Checklist	5
Family Adaptability and Cohesion Evaluation Scales III	5

a Two studies used both the SCLs (90 and 90-R) in addition to the Global Severity Index measures.

forensic mental health research. This number of different outcome measures was also likely to be manageable for the consensus meeting.

Nine different outcome measures occurred in more than four different studies (*Table 14*). The most frequent outcome measures were the Addiction Severity Index (ASI) and the various configurations of the Symptom-Checklist-90-Revised (SCL-90-R), both occurring in 15 studies. The next most frequent was the Self-Reported Delinquency Scale (SRDS), which occurred in 11 studies. The remaining six outcome measures appeared in between five and seven different studies.

The focus of interest for these selected outcome measures was the amount of evidence available for their psychometric properties for forensic populations. A simple search for psychometric properties of the selected outcome measures was conducted on MEDLINE and PsycINFO, including the keywords of the instrument name and 'validity' and 'reliability'. The subsequent gathered evidence was assessed according to four criteria:

1. Adequacy of measurement properties for general use.
2. Adequacy of measurement properties for use in forensic mental health research.
3. Feasibility of use in forensic mental health research.[12]
4. Relevance and appropriateness for use in forensic mental health research.

The evidence gathered will now be outlined for each outcome measure. As there appear to be many different interpretations of different types of psychometric properties in the literature, in this

TABLE 15 *Psychometric definitions*

Term	Definition
Reliability	
Internal consistency	The consistency of the measure or subscale items. (Normally Cronbach's alpha ≥ 0.7)
Test–retest	The consistency of test scores over two or more administrations with a time lapse. (Normally correlations between scores ≥ 0.7)
Inter-rater	The consistency of ratings between two separate raters
Validity	
Concurrent (convergent) validity	Correlation with a measure that has already been validated and measures a similar concept
Divergent validity	The degree to which a measure does not correlate with other measures that it theoretically should not be similar to
Discriminant validity	The ability of the measure to discriminate between different populations
Content validity	The extent to which a measure represents all of the facets of a concept

review the properties were classified as shown in *Table 15*.

Addiction Severity Index

General information

The ASI was developed by Thomas McLellan *et al*.[13] to evaluate the outcome of an addiction treatment. Although often conducted as a self-administered questionnaire, the ASI was designed and intended to be a semi-structured clinical evaluation interview. McLellan[14] has stated that interview training is possible for anyone who is able to form rapport, understand the patient, and probe confused answers with clarifying questions, which in their experience has been about 90% of those they have trained. The interview is predicted to last from 50 minutes to 1 hour.[14]

The ASI consists of 60 items that fall into seven subscales:

1. medical (which refers to lifetime hospitalisations and chronic problems)
2. employment/support (e.g. education and training, skills, employment patterns)
3. drug (history of drug use, treatment for addiction, overdoses)
4. alcohol (history of alcohol use, treatment for addiction)
5. legal (convictions, any current charges, criminal involvement)
6. family/social (e.g. marital conditions, stability, satisfaction, problems, conflicts)
7. psychiatric (hospitalisations and life experiences).

The interviewee answers with reference to their experiences in the past 30 days and also their lifetime in general. Individually, the interviewee and the interviewer give a rating on a five-point scale (0: not at all, 4: extremely) of the perceived severity of the interviewee's problems (severity scores). Severity scores assess the current severity of the problem area. Composite scores are then developed that consist of a combination of items that are capable of showing change.

The ASI has experienced prolific use, exemplified by nine language translations including: French, Spanish, German, Dutch and Russian.[14] It has also been utilised in many different populations such as methadone maintenance patients, alcohol treatment patients, cocaine abusers,[14] prisoners,[15,16] the homeless,[17] and the mentally ill.[18]

Adequacy of measurement properties – general

Within general drug abusing samples the ASI has displayed good reliability[13] and validity.[19,20] Exploration of the factor structure has replicated the seven subscales with 990 methadone maintenance patients.[21] However, Alterman *et al*.[22] identified only five addiction problem scales (psychiatric, drug, alcohol, family and legal) from a sample of 1008 substance dependent patients. This five-factor structure may also represent problems that have occurred with discriminant validity through correlations between the social and psychiatric subscales.[23] Thus, the social and psychiatric subscales may not measure distinct areas.

Adequacy of measurement properties – forensic mental health

Information regarding the psychometric properties of the ASI within an English speaking forensic sample was found in only one report – a study of 128 inmates by Amoureus.[15] Also, the French version of the ASI was tested by Brochu,[24] and found to have sufficient reliability and validity with 304 inmates.

Reliability – internal consistency

The internal consistency of the subscale composite scores has been shown to be good in a drug abusing inmate sample.[15] All of the alpha coefficients were above the recommended 0.6 (medical 0.8; employment 0.63; alcohol 0.65; drugs 0.77; social 0.72; psychiatric 0.76), except for the legal (0.53) scale.[25]

Discriminant validity

To display good discriminant validity, the ASI subscales that denote different problem areas must not correlate, thus displaying measurement of different constructs. Each subscale area must measure unique entities. A prisoner sample of 128 inmates[15] showed that overall most of the severity and composite scores of one subscale correlated, whilst most of the different subscales did not. However, a strong association was found to exist between the severity ratings and composite scores for employment and psychiatric disorders (0.33, $p < 0.001$). Also, the severity ratings and composite scores for social and psychiatric (0.55, $p < 0.001$) and social and employment (0.40, $p < 0.001$) problem area subscales were seen to correlate with each other.

Concurrent validity

In the prisoner sample[15] the concurrent validity was assessed through correlation of recent (within last 6 months) Diagnostic Interview Schedule/DSM-III diagnoses and the ASI psychiatric severity ratings (low severity, medium severity, high severity). The high severity group were significantly different to the medium and low group for depressive episode, any depressive disorder, any anxiety disorder and any DSM-III axis I disorder.

Feasibility for forensic mental health research

The ASI is quite a long interview (1 hour) and may only be feasible as an intake assessment rather than a repeated outcome measure. The high rate of individuals able to conduct the interview suggests its transferability to researchers rather than it just being administered by clinicians.

Relevance to forensic mental health research

Substance abuse is highly prevalent in forensic populations,[26] and may influence offending behaviour through illegal attempts to fund a drug habit and intoxication influenced behaviour.[27] Thus, a large body of research considers the influence of substance abuse within forensic mental health research, making the ASI highly relevant.

Addiction Severity Index summary

Overall, the ASI has produced positive evidence in favour of its reliability and validity within both a general substance abusing population and a prison sample. Specifically, within a forensic prison sample an area of caution is the legal subscale, which did not produce good internal consistency. This weakness is of concern as the ASI's legal subscale is often highlighted within forensic mental health outcome research as a self-report criminal behaviour outcome measure. Thus, for assessment of substance abuse severity within a forensic sample the ASI appears valid, yet caution must be paid to its legal scale for reporting offending behaviour outcomes. Overall, the ASI has received much attention for its reliability and validity within general substance abusing populations, yet within forensic samples the evidence is sparse. Although the study by Amoureus[15] provides a comprehensive view of the psychometric properties of the ASI, the sample is small ($n = 128$). As the ASI was the most frequently used outcome measure in the studies included in this review it is questionable whether its suitability for forensic mental health research has been fully explored.

Beck Depression Inventory

General information

Created by Beck *et al.*[28] and then revised in 1971, the Beck Depression Inventory (BDI) is a self-report instrument. It consists of 21 items that are considered to be symptoms of depression. The individual rates each item on a 0–3 scale. These scores are then totalled, with higher scores reflecting the most severe depressive symptoms.

The BDI has been used in more than 2000 empirical studies in the years since its introduction in 1961.[29] There is a long form consisting of 21 items and a short form consisting of 13 items. These two forms have been found to correlate strongly (0.89–0.97) in populations such as psychiatric, non-psychiatric and heroin addicts. A later version, the BDI-II[30] was constructed to make the instrument more compatible with DSM criteria; this version was also highly congruent to the previous version long form. However, the short form is thought to represent one cognitive symptom dimension, whereas the long form also represents non-cognitive symptom clusters.[30]

Adequacy of measurement properties – general

The longevity of the BDI has made several meta-analyses on its psychometric properties available. Beck[31] reviewed studies from the BDI's inception in 1961 to 25 years later, 1986, whilst Richter *et al.*[29] extended a review from 1961 to 1998. These meta-analyses have provided ample evidence for the strong validity and reliability of the BDI in both psychiatric and non-psychiatric populations. The only problems reported with the BDI concern divergent validity for associations with anxiety and questionable test–retest validity, although it has been argued that these reflect the sensitivity of the BDI to change. In addition, results concerning the factor structure of the BDI have varied from three to seven factors. Of these studies, a three-factor structure including negative attitudes towards self, performance impairment and somatic disturbance was found by Beck and Lester,[32] and then later replicated by Tanaka and Huba.[33]

Adequacy of measurement properties – forensic mental health

Compared with the extensive evidence for the BDI from psychiatric and non-psychiatric populations, few studies actually examined a forensic population. Giambra[34] included 20 male prisoners in a sample also consisting of 91 college students, and Scott *et al*.[35] tested a sample of 65 female prisoners. A larger study of 1494 prisoners considered only the discriminant validity and the factor structure of the BDI.[36]

Reliability – internal consistency

High internal consistency was displayed in a sample including 29 male prisoners with 91 college students (Spearman–Brown coefficient of 0.87)[34] and a sample of 65 female prisoners (alpha coefficient of 0.9).[35]

Discriminant validity

In a prisoner population the BDI was able to discriminate between those in close custody and those in medium or minimum custody, as they were significantly more depressed.[36] Also, first-time prison inmates displayed significantly more depression on the BDI.

Concurrent validity

Within a forensic population of 29 male prisoners, included with 91 college students, the BDI correlated with the Zung SRDS with a correlation coefficient of 0.66.[34] Also, the BDI displayed a correlation coefficient of 0.63 with the Minnesota Multiphasic Personality Inventory (MMPI) Depression Scale in a sample of 65 female prisoners.[35] Thus, the BDI has displayed good concurrent validity within forensic samples.

Factor structure

In a prisoner sample of 1494, four distinct factors were found: cognitive symptoms, vegetative symptoms, emotional symptoms and feelings of punishment.[36]

Feasibility for forensic mental health research

The BDI is a self-report measure which is available in both a 21-item and 13-item form. The short duration of completing the BDI means that it would be suitable for repeated measures outcome measurement, possibly as part of a testing battery. The limitation of self-report instruments in a forensic population is the low levels of literacy. However, assistance with understanding the items would still take limited time, especially with the short form.

Relevance to forensic mental health research

Depression is clearly a large problem associated with incarceration,[36] and is thus highly relevant to forensic mental health research. Feelings of depression may lead to suicide attempts,[32] which pose a public health issue. Depression may also affect the impact of interventions as the participant may not be susceptible to behaviour change whilst unable to conceive of a future.[37]

Beck Depression Inventory summary

The BDI has displayed good psychometric properties in psychiatric and non-psychiatric samples. In forensic samples the high internal consistency and satisfactory concurrent validity have been replicated, but test–retest reliability and divergent validity have not been explored. Further, the varying factor structures displayed by non-forensic samples are sustained by the four-factor solution displayed by a prisoner sample, where a factor specific to incarceration appears to have developed: feelings of punishment. Thus, whilst the BDI has displayed robust qualities in psychiatric and non-psychiatric populations, its direct applicability to forensic samples requires more examination as it may measure alternative themes.

Brief Psychiatric Rating Scale

General information

The Brief Psychiatric Rating Scale (BPRS) was created by Overall and Gorgam[38] for use with individuals with psychiatric disorders such as schizophrenia. It evaluates treatment change whilst also describing major symptom characteristics.[38] The BPRS usually takes the form of an interview. Self-administered forms of the scale are not encouraged as the interview allows disorganised speech and unusual thoughts to be more easily observed. The interview should be conducted only by clinicians or other trained raters such as social workers, as an understanding of the symptoms and their scores is required. However, high levels of

training are not absolutely necessary for reliable administration of the BPRS. Ventura *et al*.[39] found that both an advance trained and a postdoctoral group of administrators were able to produce an excellent inter-rater reliability intraclass correlation coefficient for 22 of the 24 items. Further, the excellent levels of reliability were maintained over 6 and 12 months after initial training.

There are several versions of the BPRS. Originally it was a 16-item measure[38] based on principal symptom factors from a large set of items taken from the Inpatient Multidimensional Psychiatric Scale.[40] In 1974 Overall[41] added two new symptom items, and in 1986 Lukoff *et al*.[42] added six more for better evaluation of patients with schizophrenia. The 18-item version has also been anchored.[43] A global symptom score can be calculated by adding the points for each item. Even though there are many different versions, many researchers refer to all of them as the BPRS, so it can be difficult to establish which variant has been used.[44]

The BPRS consists of 16–24 items that are rated on a seven-point scale (1: not present; 7: extremely severe) that measures positive and emotional symptoms, along with general psychopathology. Some items require self-reporting by the patient (e.g. anxiety, hallucinations, etc.), whereas others can be observed (e.g. mannerisms). The BPRS items produce four subscales including thinking disturbance, withdrawal retardation, anxious depression and hostile suspiciousness. The interview is specified to last 18 minutes, but in practice it can vary according to the patient.[39]

The BPRS has been cited in over 1000 medical studies as the main outcome measure for psychopharmacological and psychotropic medications.[44] Its popularity is also expressed by its presence in the list of outcome measures identified for use in the assessment of psychiatric symptom change by the Joint Commission of Accreditation of Healthcare Organizations,[45] which evaluates and accredits nearly 19,000 health-care programmes and organisations in the USA.

Adequacy of measurement properties – general

The BPRS has displayed good internal consistency, inter-rater reliability,[46] discriminant validity,[46] and a relatively consistent factor structure Hedlund and Vieweg.[47] However, these studies of reliability and validity were conducted on psychiatric patients, with little information about the psychometric properties of the BPRS conducted on forensic mental health populations.

Adequacy of measurement properties – forensic mental health

Few studies were available to provide the psychometric properties of the BPRS in a forensic sample, with the most comprehensive study describing the concurrent validity of the BPRS for 192 prisoners.[48]

Reliability – inter-rater

Concordance of ratings with a 'gold standard' training level for 21 mental health professionals from a forensic psychiatric hospital displayed an average 0.83 concordance rate for all the items combined, ranging from 0.60 to 0.98 for each item.[49]

Discriminant validity

The BPRS total score was able to predict violence in 34 mentally disordered offenders.[50]

Concurrent validity

In a sample of 192 prisoners the BPRS identified 33% defined broadly as having a disorder and 15% defined narrowly as having a disorder.[48] These results were compared with 14% broad and 11% narrow from the diagnostic profile, and 80% broad and 16% narrow from the diagnostic interview schedule, version III-A.[51] The BPRS and diagnostic profile had moderate agreement ($k = 0.45$, $p < 0.001$), but nearly no agreement with the diagnostic interview schedule on broad disorders. For narrow disorders the BPRS and the diagnostic profile agreed ($k = 0.57$, $p < 0.001$), but again agreement with the diagnostic interview schedule was only just significant. Thus, when compared with the diagnostic profile the BPRS displays good concurrent validity, but when compared with the diagnostic interview schedule it does not.

Feasibility for forensic mental health research

Although the BPRS is recommended for administration by mental health professionals, it appears that anyone with sufficient interview skills can administer it making it feasible for forensic

mental health research where an interviewer is available.[49] The BPRS's popularity is further reflected by its quick administration time, making it feasible for outcome measurement.

Relevance to forensic mental health research

The BPRS appears to be a convenient instrument for quick measurement of psychiatric symptoms. Thus, it is relevant to assessment of psychiatric symptoms within a forensic mental health population.

Brief Psychiatric Rating Scale summary

Information concerning the psychometric properties of the BPRS for use in a forensic mental health population is sparse. It appears to have good discriminant validity and moderate concurrent validity with the diagnostic profile, but not the diagnostic interview schedule.[48] Research about the internal consistency of the BPRS with a forensic mental health population is required, as well as factor structure exploration to determine if it measures the same properties within a forensic mental health population as within a psychiatric one.

Child Behavior Checklist

General information

The Child Behavior Checklist (CBCL) is a parent report questionnaire designed to assess the behavioural problems and social competencies of children aged 4–18 years. Developed by Achenbach[52] the CBCL consists of two sections. The first section consists of 20 competence items grouped into four competence subscales. The second section consists of 120 items concerned with problematic behaviour or emotions during the past 6 months, which are grouped into 11 problem subscales (including eight syndrome scales). There are also two higher order scales, internalising and externalising. The items are rated on a seven-point Likert scale. The CBCL is completed by the child's parents (or other adults who know the child well), and the child's problem behaviours and competencies are rated. There is also a teacher's report form using 118 items and a youth self-report form, which shares 89 of the problem items. It is recommended that only trained professionals should examine the results of the CBCL.

The CBCL has displayed much popularity by its use in over 1000 published studies between 1983 and 1993.[53] It has also been validated across 12 countries.[54]

Adequacy of measurement properties – general

The CBCL displays acceptable internal consistency[55] and satisfactory test–retest reliability.[56,57] It also differentiates well between different populations, has good divergent validity[55] and concurrent validity. However, the complexity of the measure appears to affect the independence of the subscales, with much shared variance.[58] There are also problems concerning different factor structures across age groups, perhaps making the CBCL unsuitable for children under 5 years old.[58] Finally, the dubious practice of creating new subscales from the items is a concern,[59,60] as their presence has not been apparent in any of the previous factor analysis studies.

Adequacy of measurement properties – forensic mental health

Unfortunately, no studies assessing the CBCL within a forensic mental health sample were accessed.

Feasibility for forensic mental health research

The CBCL is a substantial instrument consisting of 140 items. There is a reliance on the caregiver or teacher to fill the questionnaire, thus their perceptions are the focus of the results. However, this method of administration would present literacy and understanding problems in a young sample.

Relevance to forensic mental health research

The subscales and problem areas covered within the CBCL seem highly relevant to delinquent participants, especially the delinquent behaviour scale. The disorders that are outlined such as attention deficit hyperactivity disorder, oppositional defiant disorder and conduct disorder are also relevant for forensic mental health research in young populations. It is peculiar that the CBCL has not been psychometrically evaluated within a forensic mental health population.

Child Behavior Checklist summary

The CBCL assesses many disorders that are associated with delinquent behaviour, such as attention deficit hyperactivity disorder, oppositional defiant disorder and conduct disorder. Considering the properties of the CBCL it is surprising that it has not specifically been validated with a forensic mental health sample such as forensic hospitals and participants involved within the criminal justice system. Unfortunately, psychometric properties are available only from psychiatric populations.

Conflict Tactics Scale

General information

The Conflict Tactics Scale (CTS) was devised by Straus[61] and is used to identify and evaluate domestic violence within families and other relationships. The CTS measures the extent to which partners who are either dating, cohabiting or married engage in physical and psychological attacks on each other.[61,62] It also gauges their use of reasoning or negotiation to deal with conflicts.[61,62] It can be completed by one partner or both partners separately, although it is best to collect information from both partners in the relationship.[62] The CTS is usually self-administered but can be conducted as an interview. It takes approximately 10 minutes to complete. Anyone can complete the CTS (including children), although training is recommended for professionals who assess the reports.

The CTS consists of 78 items, half of which refer to the respondent's behaviour and the other half to the partner's behaviour. The respondent then indicates how often the behaviour has occurred on an eight-point scale. These scores make up the 'self' and 'partner' scores for the following dimensions: negotiation, physical assault, injury, psychological aggression and sexual coercion.

The original version of the CTS consisted of three scales including reasoning, psychological aggression and physical assault. The number of items in these scales was increased in the second version of the CTS, the CTS2, to increase reliability. The CTS2 also consisted of two new scales – sexual coercion and physical injury from assaults by a partner. The increase in instrument size meant that the CTS2 took 10–15 minutes to administer, whereas the CTS took 7–10 minutes. Scores are created by calculating the mean for each set of variables for each subscale and then finding the subscale means across all observations.

The popularity of the CTS was reflected by the publication of 10 studies per month using the CTS in 1994.[62]

Adequacy of measurement properties – general

The CTS displays good internal consistency for the subscales, but varied internal consistency for the items in a student sample.[62] When considering the inter-rater reliability of the CTS, the main concern is the consistency of reports from both the male and female respondents in a couple. Studies report that the male perpetrators of violence under-report their levels of violence compared with their female partner's report describing their victimisation.[63] Further, a factor analysis of the violence subscale reveals that it produces a different factor structure for males and females. Schafer[64] reported that factor analysis studies show that the violence subscale consists of one factor for female respondents, but not for male respondents. Using the same measure for both males and females may lead to measuring different concepts; a more unitary measure may be required. These conceptual problems cause concern for the validity of the CTS for measuring violence within couples.

Adequacy of measurement properties – forensic mental health

Although the CTS measures behaviour that may be classed as criminal, only two studies have assessed its psychometric properties within forensic samples. First, Browning[65] used a sample of 30 couples where the males were in treatment for domestic abuse, and Jones *et al*.[66] used a sample of 264 incarcerated females.

Reliability – inter-rater

Browning[65] found that in 30 couples, in which the male was in treatment for domestic violence, the wives rated significantly more violence for their husbands than their husbands rated for themselves [$F(3, 87) = 26.045$; $p < 0.001$]. However, there was no difference between the husband rating the wife with the wife's own rating. Overall, the

correlation of agreement for the husband and wife violence increased for more severe forms of violence. The difference between partner ratings of violent behaviour is likely to represent the minimising of violent behaviour on the part of the perpetrator. When using the violence scale of the CTS, researchers must be aware of the difference in ratings likely to occur between the perpetrator and the victim.

Concurrent validity

A sample of 264 incarcerated females[66] completed the CTS2 and the Abusive Behavior Checklist.[67] All of the items from both the self as victim and self as aggressor subscales were positively and significantly correlated with the Abusive Behavior Checklist items.

Factor structure

There has been criticism of the violence subscale due to the occurrence of different factors for male and female reporters. In a sample of 264 incarcerated female participants, where prevalence and severity of domestic abuse was high, exploratory factor analysis was conducted combining both the self as victim and the self as aggressor subscales.[66] The factors found were negotiation, sexual coercion, injury and general assault. Whilst these four factors represent three of the CTS's subscale dimensions, the psychological and physical aggression subscales had combined into one factor: general assault.

Feasibility for forensic mental health research

The CTS is quite flexible in its administration with the ability to use it as a self-report or an interview. The instrument is also of moderate length, thus may be acceptable as part of an assessment battery. A problem with feasibility for forensic mental health research is the acceptability of the item content. The CTS asks about highly sensitive information, thus, high refusal rates and distorted answers have been observed, which can result in invalid data.[61]

Relevance to forensic mental health research

Domestic violence is a large issue within forensic mental health, thus the CTS is highly relevant. The relevance of domestic abuse as a standalone offence class for study in forensic mental health research was displayed by 6.2% of the studies identified by this review considering participants who had committed this offence. Further, the propensity for ratings from both partners provides more than one view of the violent behaviour.

Conflict Tactics Scale summary

The CTS measures the commission of violence in couples. The CTS has been validated using couple groups from the general population, such as students[68] and military personnel.[69] However, only two studies were found that specifically assessed the CTS within forensic samples, a female incarcerated sample and a couples sample where the male was receiving treatment for domestic abuse. A significant concern related to the CTS is the apparent under-reporting of their own violent behaviour in male participants compared with female participants.[65] Perhaps the under-reporting of the males specifically taps the cognitive distortion of minimising violent behaviour,[70] but this issue still causes problems for inter-rater reliability. Further, the four-factor structure of the CTS for incarcerated females did not correspond with the five CTS subscales. The varying factor solutions may provide further evidence that the CTS measures different factors between male and female respondents, although the difference provided by Jones *et al*.[66] may be due to the forensic sample compared with a non-forensic sample.

Family Adaptability and Cohesion Evaluation Scale

General information

The Family Adaptability and Cohesion Evaluation Scale (FACES) was compiled from the constructs of cohesion and adaptability from the circumplex model.[71] Family cohesion assesses the degree of separation or connection of family members to the family. There are four levels of family cohesion ranging from extreme low cohesion to extreme high cohesion, these are: disengaged, separated, connected and enmeshed. In addition there are four levels of adaptability: rigid, structured, flexible and chaotic. From the four levels of family cohesion and four levels of adaptability, a classification of 16 family types is constructed, with three more general types: balanced, mid-range and extreme. Family members answer 20

statements and then estimate the relative truth of the statement, and then on a second scale indicate what the individual would like his or her family to be. The FACES can be used with all types of families (e.g. with children, without children, etc.), and can be completed by children aged 12 years or older. This instrument was popular until the early 1990s when the value of the circumplex model began to be questioned.[72]

Adequacy of measurement properties – general

For a measure that reached eligibility for inclusion in this review, information about its psychometric properties are sparse. Most studies examining the FACES have considered the structure of the circumplex model rather than indices of reliability or validity. A study that has considered reliability displayed good internal consistency for the subscales in a sample of 243 university students.[73] The FACES is also able to discriminate well between different types of family.[74] However, low consistency of scores between family members and therapists does cause concern.[75]

Adequacy of measurement properties – forensic mental health

Similar to general information about the psychometric properties of the FACES, there is little information concerning forensic samples.

Discriminant validity

Amongst a delinquent child father-absent family ($n = 29$) and father-absent families without history of arrest or psychiatric referral ($n = 29$), the FACES was able to differentiate the delinquent from the non-delinquent families.[76]

Factor structure

Some researchers have not found the three subscales of cohesion, adaptability and social desirability to be easily differentiated through factor analysis.[75] This result was partially replicated in a sample of 95 male juvenile offenders, where only two factors that resembled the cohesion and adaptability factors were found.[77] The lack of differentiation of a social desirability factor within a forensic sample causes concern for two reasons: the ability of the FACES to detect lies from a forensic population and an alternate measurement structure between populations.

Feasibility for forensic mental health research

The FACES is a self-report instrument that is of a reasonable length. However, the instrument may be slightly conceptually complex with the respondent requiring to answer both how his or her family currently is and how he or she would like their family to be. The scoring of the instrument and placement into family types may also be complex.

Relevance to forensic mental health research

Within the wider sphere of forensic mental health the FACES may be useful to assess a participant's home circumstances. However, as an outcome measurement family cohesion does not appear a strong candidate as a main measure of outcome in forensic mental health.

Family Adaptability and Cohesion Evaluation Scales summary

The FACES appears to distinguish between delinquent and non-delinquent families, thus displaying good discriminant validity. In comparison with non-forensic samples, forensic samples appear to report results that consist of two factors rather than three. This may reflect a difference between the two populations regarding what the instrument measures. Again, the information for the psychometric properties of the FACES for a forensic mental health sample is sparse.

Revised Behavior Problem Checklist

General information

The Revised Behavior Problem Checklist (RBPC) is a teacher and parent rating instrument for the major broad categories of child psychopathology.[78] It takes approximately 20 minutes to complete, and consists of 89 items, which the individual then rates on a three-point Likert scale: 0 = not a problem; 1 = a mild problem; 2 = a severe problem. These scores refer to four major subscales including conduct disorder, socialised aggression, attention problems immaturity and anxiety withdrawal, and two minor subscales: psychotic behaviour and motor tension excess.

It is recommended that examiners should have at least a bachelor's degree in psychology, counselling

or a related field and relevant coursework in psychological measurements and tests.

Adequacy of measurement properties – general

The RBPC has been evaluated in general populations consisting of samples of young school children. The four major and minor subscales have produced good internal consistency.[79,80] However, inter-rater reliability was not as robust with only mild to modest agreement between parent and teacher ratings.[79] Also, test–retest reliability was not good for longer time periods such as 17 months.[81] Good concurrent and divergent validity has been proven through relevant associations of the attention problems and inattention subscales with DSM-III criteria for attention deficit hyperactivity disorder and interaction/aggression.[79] The original factor structure of four major and two minor scales[80,82] was replicated with similar factors from a sample of 284 kindergarten children, who were at risk of psychopathology and also with 299 who were not at risk.[79]

Adequacy of measurement properties – forensic mental health

Locating studies examining the psychometric properties of the RBPC within forensic samples was difficult, with only one assessing the discriminant validity.

Discriminant validity

A sample of 24 incarcerated juvenile offenders was compared with 24 non-offending adolescents on the subscales of the RBPC.[83] The offender sample scored higher than the non-offending sample on all subscales of the RBPC, thus displaying more psychopathology, psychoticism, externalising problems and also internalising problems. Therefore the RBPC distinguished between the offenders and non-offenders.

Feasibility for forensic mental health research

Similar to the CBCL, the RBPC is administered to either the teacher or caregiver of the participant. Thus, the results are of the perceptions of the adult who completes the form rather than directly from the individual being assessed. Third-party form completion also means an extra complication for gathering repeated measures, where the most valid results would occur from administration to the same individual. In addition, scoring of the instrument is recommended to be conducted by individuals with psychological qualifications. A positive aspect of the feasibility of the RBPC is the short 20-minute administration time, making it suitable for repeated use within an assessment battery.

Relevance to forensic mental health research

Again, similar to the CBCL, the RBPC measures child psychopathology that may be relevant to offending behaviour, such as conduct disorder and aggression. However, there are no subscales to assess the development of delinquent offending behaviour as there are in the CBCL.

Revised Behavior Problem Checklist summary

Overall, there is little psychometric evidence for use of the RBPC within a forensic mental health population. The evidence that does exist displays that it can distinguish between delinquent and non-delinquent samples. However, although the RBPC measures child psychopathology that would be relevant to offending behaviour, a subscale measuring offending behaviour does not exist.

Symptom-Checklist-90-Revised

General information

Derogatis[84] devised the SCL to evaluate a range of psychological problems and symptoms of psychopathology. The SCL consists of 90 items that the participant rates on a five-point scale. The items reflect nine primary symptom dimensions: anxiety, depression, hostility, interpersonal sensitivity, obsessive compulsive, paranoid ideation, phobic anxiety, psychoticism and somatisation. The SCL is used by professionals in mental health as well as medical and educational settings in addition to research purposes. It is generally administered only to individuals aged 13 years and older. The instrument should take between 10 and 20 minutes to administer.

The SCL is often used as an initial evaluation of patients for symptom assessment, measuring a patient's progress during and after treatment, as an outcome measurement, and in clinical trials to measure change.

The SCL-90-R[84] has several precursors: the Hopkins Symptom Checklist-58 (HSCL-58),[85] the SCL-90[86] and the HSCL-90.[87] The SCL-90 expanded on the previous HSCL-58, with the HSCL-90 and the SCL-90 being almost identical. Finally, the SCL-90-R consisted of the same nine dimensions as the SCL-90, but with modification of seven items and replacement of two items. An overall score known as the Global Severity Index may be constructed from the total of the items from the SCL-90-R.

Adequacy of measurement properties – general

The SCL-90 has displayed good internal consistency for all of the subscales[88] and good test–retest reliability over a week.[84] For concurrent validity the SCL-90-R subscales displayed acceptable associations with DSM-III-R diagnoses for anxiety and depression with 408 primary care outpatients.[89] Further, the relevant subscales of the SCL-90 displayed good concurrent validity with associated subscales from the MMPI[88] with 209 symptomatic volunteers. However, divergent validity was not as strong with many of the MMPI subscales correlating with many of the SCL-90-R subscales. Results from factor structure investigation have varied between eight[90] and nine[86] meaningful factors. Evidence for use of the SCL-90-R as a set of nine subscales is limited to its internal consistency, inter-rater reliability and convergent validity. Evidence against use of the nine subscales is their shared variance, and the fact that many of the subscales correlate to depression and anxiety. Consequently, some researchers consider the SCL-90 to measure one construct of general distress rather than distinct dimensions of psychopathology.[91] In support of one dimension, the variance accounted for by one factor has been up to 9.25 more than that of the second factor.[92] As Cyr *et al*.[92] state, the SCL has been plagued with problems for defining consistently independent dimensions of symptom distress. Perhaps the best use of the SCL-90-R is for its Global Severity Index, which as a total score adheres to a single dimension.

Adequacy of measurement – forensic mental health

Only one study was available assessing the psychometric properties of the SCL-90 in a forensic population.

Concurrent validity

Wilson *et al*.[93] examined a sample of 89 men remanded in prison awaiting trial in the hospital area. The SCL-90 displayed associations with items on the Comprehensive Psychopathological Rating Scale (CPRS), including moderate correlation between obsessional subscales (0.41) and good agreement with the depression subscales (0.62). Also, the CPRS schizophrenic subscale displayed associations with the SCL-90 subscales of psychoticism (0.63), paranoid ideation (0.53) and interpersonal sensitivity (0.44). The Present State Examination displayed appropriate correlations between its 38 syndrome diagnoses and the relevant SCL-90 subscales. However, the only subscale on the SCL-90 that distinguished psychotic from non-psychotic participants was the paranoid ideation subscale ($t = 2.74$, $p < 0.01$), which was surprising considering the three subscales that had correlated with the CPRS schizophrenic subscale.

Feasibility for forensic mental health research

The SCL-90-R takes a short time to administer for such a comprehensive range of dimensions. However, it is recommended to be administered by professionals, limiting its use for untrained researchers. The SCL-90 is feasible for use with a forensic population as prisoners understood the words used.[93]

Relevance to forensic mental health research

The SCL-90-R is relevant to forensic mental health research as it can assess the psychopathology of participants. Thus, its usefulness in general mental health research is readily transferable to forensic mental health.

Symptom-Checklist-90 summary

Other than concurrent validity, the psychometric properties of the SCL-90 and its predecessors have not been evaluated using a forensic population. Although it is informative to know that the SCL-90 displays good concurrent validity in forensic samples it is the other areas of validity that have been shown to be low with non-forensic samples, such as the factor structure and the feasibility of using the subscales as different dimensions of

measurement rather than as a Global Severity Scale. Therefore, it is imperative that these areas of psychometric evaluation are conducted for a forensic mental health population.

Self-Reported Delinquency Scale

General information

The SRDS was created for use in the National Youth Survey in 1977.[94] Participants report their delinquent activities including property damage, theft, assault and substance use. An interview was thought to produce more reliable data than self-report. The instrument consists of 47 items for which the respondent is first asked if they have committed the offence over 10 times in the last year (from the past Christmas to the previous Christmas), if so then they can choose how often (i.e. 2–3 times a day to once a month). For each type of delinquent act, the participant is also asked if other people were involved and if the participant was under the influence of alcohol or drugs at the time of the act. The items are intended to examine whether or not the participant has committed any delinquent acts on both a frequency and a variety score. The means of the items are calculated to create two types of scales: offence general category scales (which refer to status offences and interpersonal violence) and summary scales (which refer to index offences and general delinquency).

The SRDS was used in the 1977 National Youth Survey, which consisted of a probability sample of households in the USA, producing a sample of 1726 youths.[94] After 5 years of panel data, the fifth National Youth survey sample consisted of 1494 youths from the original 1726, thus displaying a high retention rate.[95]

Adequacy of measurement properties – general

Huizinga and Elliott[96] believe that using internal consistency as a measure of reliability for the SRDS is inappropriate as there have no expected links between different types or frequencies of delinquent behaviour. Test–retest reliability was conducted with 177 youths at a 4-week period.[96] The correlations were 0.75 for the frequency score and 0.84 for the variety score. For the crime-type subscales, the reliability correlations were from 0.52 to 0.93. Content validity was considered at instrument construction where several steps were taken to ensure it was high, including offences listed by the Uniform Crime Reports and those considered relevant in the literature. Finally, concurrent validity was assessed through social trends from the SRDS with official arrest data.[94] They found that the SRDS race/class categories displayed similar trends to the official arrest data.

Adequacy of measurement properties – forensic mental health

All of the psychometric properties of the SRDS were assessed using the National Youth Panel data, which consisted of a section of all youths in a community that included some delinquents. Data have not been collected and evaluated using a purely forensic mental health sample.

Feasibility for forensic mental health research

The SRDS is thought to be best administered as an interview rather than self-report, thus requires an interviewer. Reporting also requires a participant with a good memory, for identification of the amount of times the offence was committed over the last year. Thornberry and Krohn[97] report a substantial amount of concealing or forgetting past criminal behaviour, producing considerable under-reporting. For example, in self-reported substance abuse, validity may be less for more serious offences involving hard drugs such as heroin than for those involving soft drugs such as tobacco and marijuana.[97]

Relevance to forensic mental health research

The SRDS is purely a measure of offending behaviour, rather than an index of mental health. Thus, from a purely forensic perspective, it would be useful to assess criminal activity, yet it would not provide information about the participant's mental health.

Self-Reported Delinquency Scale summary

Thornberry and Krohn[97] believe that the SRDS appears to have acceptable content validity, and construct validity appears high, with concurrent validity being from moderate to strong. Reliability also appears quite high, although there is no evidence of differential reliability. Overall, the

SRDS appears to be better than previous self-report measures of delinquency that had questionable content validity with few items to assess the full range of criminal activity, which erred towards the trivial end.

Summary of most frequently used outcome measures

Several instruments were found to be used with some frequency, having been extensively used as assessments of key aspects of mental health in other more general populations: the BDI, the BPRS and the SCL-90.

Overall, not one of the outcome measures that occurred in over four studies in the review has been substantially psychometrically tested with a forensic mental health population. Further, the most frequently occurring outcome measures displayed in this review were not formulated for use in forensic mental health populations. For instance, the ASI was formulated for use with substance abusing samples, and the SCL-90 for use with psychiatric samples.

Mental health is the focus of most of the measures including the BDI, BPRS, CBCL, RBPC and SCL-90. Only the CBCL also includes a delinquency subscale to assess offending behaviour. Alternatively, the CTS and the SRDS focus solely on offending behaviour, thus not fulfilling any mental health measurement. Some measures consider both aspects of forensic mental health, with the ASI including both a legal and a psychiatric subscale, amongst five others assessing life circumstances and substance use. The wide scope of the ASI would make it the instrument that considers the most domains within forensic mental health, a topic discussed by the consensus group that is reported in the next section. Finally, the FACES considers family cohesion, which would appear to be a component of forensic mental health, although not a focal issue. In summary, the foci of mental health, offending behaviour and addiction are elements that are changeable through intervention, and thus are of major interest in forensic mental health outcome research. Instruments exist that can be considered sound assessments of these domains.

The prevalence of four measures that are aimed at youth samples including the CBC, FACES, SRDS and RBPC reflect the high proportion of studies assessing interventions aimed at young offenders. These measures may also be useful for research concerning youths that are at risk of offending. Both the CBC and the RBPC assess child psychopathology, yet neither has any significant evaluation of its psychometric properties within a forensic mental health sample, thus reliance remains with results from psychiatric samples for psychometric evaluation. It is questionable whether these psychometric results are transferable to a forensic context.

The next results section reports the findings from the panel of experts regarding their views of the most frequent outcome measures found in the structured review.

Consensus opinion about the most frequent outcomes

The nine most frequently occurring instruments from this structured review that have just been reported in the previous section were rated and discussed by the consensus panel.

Outcome measures: ratings

Only two instruments were known to the whole group, the BDI and the BPRS. The SCL-90-R was known to all but one expert. The remaining measures were not widely known, with only three people having heard of the SRDS, FACES, CTS and CBCL, and only one person knowing of the ASI and the RBPC.

Table 16 shows the group mean ratings for each instrument on the three scales of relevance, feasibility and adequacy of measurement properties. Instruments are listed in rank order for each rating. As can be seen, ratings were generally low, with few instruments receiving ratings approaching 'very good' on any scale.

Three instruments emerged as consistently the best in terms of all three ratings made by the group: the BDI, BPRS and SCL-90-R. Whilst all three were considered fairly or very relevant and feasible, their measurement properties in relation to forensic mental health were only considered adequate. Some instruments, such as the ASI and SRDS, were considered relevant or feasible, but were rated less favourably in terms of their measurement properties, especially in the specific forensic mental health context. Most of the remaining instruments were considered only marginally relevant and

TABLE 16 *Group mean ratings from consensus meeting (scales listed in rank order for each dimension separately)*

Relevance to forensic mental health		Feasibility for forensic mental health		Adequacy of measurement properties (forensic mental health)		Adequacy of measurement properties (general)[b]	
Scale	**Group mean rating[a]**	**Scale**	**Group mean rating[a]**	**Scale**	**Group mean rating[a]**	**Scale**	**Group mean rating[a]**
BPRS	3.6	BDI	3.9	BPRS	2.5	BDI	3.6
SCL-90-R	3.5	BPRS	3.9	BDI	2.3	BPRS	3.2
BDI	3.3	SCL-90-R	3.3	SCL-90-R	1.9	ASI	3.0
ASI	3.0	SRDS	2.9	SRDS	1.6	CBCL	2.0
CTS	2.6	ASI	2.5	RBPC	1.3	SCL-90-R	2.0
SRD	2.6	CTS	2.0	ASI	1.3	SRDS	1.8
CBCL	2.3	CBCL	1.9	CTS	1.3	RBPC	1.6
FACES	1.6	FACES	1.9	FACES	1.3	CTS	1.4
RBPC	1.6	RBPC	1.6	CBCL	1.2	FACES	1.3

a Scale ranged from 1 (not), 2 (slightly), 3 (fairly) and 4 (very) to 5 (extremely).
b This scale was added during the meeting at the recommendation of the group.

feasible with adequate to poor measurement properties.

The final column of *Table 16* was added on the recommendation of the group. It reflects the view that the scales should also be rated in terms of their general measurement properties, to acknowledge the possibility that some may not have been assessed in specific relation to forensic mental health populations. This is captured by the somewhat higher ratings (better properties) in this general column, particularly for those scales ranked towards the top.

Outcome measures: group discussion

The group agreed that most of the domains previously identified and confirmed as important were not represented by the current selection of instruments. There was agreement that there were many potential outcome measures that to date have been used only as predictors or measures of process and that future work should recognise their potential as outcome measures in trials and evaluative studies. It was felt that candidate measures of outcome could be found in existing measures of impulse control, antisocial attitudes, aggression, emotional control, impulsivity, socialisation, self-awareness, severity of opiate dependence and alcohol use. Specific instruments suggested include the Psychological Inventory of Criminal Thinking Styles;[98] the Anti-Social Activities Attitude Scale;[99] the Criminal Sentiments Scale;[100] the Barratt Impulsivity Scale;[101] the Novaco Anger Scale;[102] and the Self-Appraisal Questionnaire.[103]

The group felt that risk assessment tools such as Historical, Clinical, and Risk Management Scales (HCR-20)[104] and the Violence Risk Scale[105] offered a particularly promising source for outcome measures. However, there was little formal evidence of their use in this context other than as predictive tools.

The discussion highlighted the need for more research to establish validity and relevance both for instruments reviewed here and for other suggested outcomes of interest. There is a need for this to focus specifically on forensic mental health populations, as extrapolating from general population psychometrics may be invalid. There was a notable absence of 'positive' measures able to reflect desirable rather than undesirable outcomes.

The outcome measure of recidivism

By far the most prevalent outcome variable used in the eligible studies in this structured review was some form of offending behaviour or recidivism, occurring in 72% ($n = 223$). The domain of

recidivism is considered further in terms of the data collected in the structured review and discussion on the topic in the consensus panel.

Recidivism measures from the structured review

Table 17 displays how the different studies recorded offending behaviour. In the true sense of the term recidivism, the legal indices of re-offending included the legal process from contact with the police to time spent incarcerated and violations whilst on parole. The most frequent of these measurements was arrest, followed by conviction. Most frequently, the type of offence measured was unspecified. About a third of the arrest measures and just under half of the conviction measures specified a violent or sexual offence, thus determining a more specific mode of reoffending. The presence of specific violent or sexual offending behaviour also occurred only for criminal behaviour, arrest, charge, conviction and offence, displaying a narrower range of measurement than for any unspecified type of offence. This pattern was similar for other specified types of offence that were not violent or sexual with only the addition of parole violation as the index of criminal behaviour. A very non-specific measure of recidivism was displayed in 42 measures of reoffending behaviour in studies that used only the definition of reoffence, not specifying at what point during the legal process data were collected. Participant reports of offending behaviour that did not reach legal attention were only the fifth most prevalent measurement type for unspecified offence types, yet were the fourth most prevalent in specifically violent or sexual offences and second with specified offences that were not violent or sexual. These results show that for specific types of offences, forensic mental health researchers are interested in actual criminal behaviour, whereas more general offending that is not specified invites more legally defined measures. Use of measures of general offending may reflect use of databases where classification of specific offence types may not be available, or conceptually difficult.

The source of the recidivism data was most frequently official records; for example, the Home Office Offender Index, or state/national records in the USA (*Table 18*). Sixteen studies used both official records and self-reports, which would provide a method of validation for both sources: crimes committed and not detected for official records, and crimes not admitted to or forgotten in self-report.

TABLE 17 *Different forms of recidivism measurement by offence type*

	Type of criminal behaviour		
Index of criminal behaviour	**Any type of offence/ unspecified**	**Specifically a violent or sexual offence**	**Other type of offence categorisation (specified, not violent or sexual offence)**
Criminal behaviour	25	15	9
Contact with police	1	0	0
Arrest	59	18	12
Charge	19	13	7
Court	7	0	0
Conviction	40	25	9
Parole violation	30	0	1
Community	4	0	0
Institutional	6	0	0
Time incarcerated	26	0	0
Time until incarceration	3	0	0
Offence – general (no specific stage of criminal process)	24	14	4
Other	11	0	0

TABLE 18 *Source of offending behaviour data*

Source of data	Official records	Self-report	Unknown
Number of times used	172	46	21

Consensus group discussion about recidivism

Finally, the group returned to general discussion about the use of recidivism as an outcome measure. An enormous range of indicators have been used including convictions, arrest, court appearances and revocation of parole. Different indicators reflect levels of severity of the recidivist behaviour. Which indicator to use depends on the precise study aims, population and context. It was felt that there was promising evidence that self-reported offending behaviour can be accurate.[103]

Recidivism itself was noted as being a proxy measure. Reconviction, arrests and other indicators will only be a sampling of the true frequency of antisocial acts. In addition these indicators are unlikely to be pure. For example, incidents in addition to violent acts may lead to revocation of parole.

An inherent problem was noted for outcomes involving severe offending behaviours, namely that these are usually rare. Use of rare behaviours (such as homicide) as outcomes can be problematic owing to statistical issues of power. Lower level crimes could be considered precursors of more serious offences, suggesting that the former could be useful as proxy outcomes for more serious behaviours.

More objective measures such as recidivism were contrasted to intervening variables, such as aggressive interpersonal style and other psychological and social measures. Both were considered important for future research.

Chapter 4
Discussion

This report has consisted of two distinct but related components. Firstly, a structured review of forensic mental health outcome research was carried out to assess the use of outcome measures. Secondly, the literature review was supported and supplemented by a multidisciplinary consensus process that identified and rated the importance of different domains that might be assessed in terms of outcomes in forensic mental health research and then judged the most frequently used outcome measures identified from the structured review.

There are some limitations to the study. First, only references in the English language were examined in the review, which may have caused biases due to sampling. In a similar vein the consensus group consisted of participants from the UK only. It is not possible to estimate to what extent an international consensus group would have reached similar conclusions. Second, the review considered only references gleaned from electronic databases, and owing to time constraints did not include dissertations. There is a body of research conducted by international justice departments such as the Home Office and New Zealand, Australian and Canadian corrections departments that would also provide eligible studies. These justice sources were also not included in the review because of time constraints, although many of them would have appeared in our electronic database search owing to subsequent journal publication. Finally, not all of the references marked as relevant at the abstract stage were accessible as hard copies. It is nevertheless difficult to believe that, even with these acknowledged methodological limitations, outcome measures were omitted from the review that might have proved more robust and more frequently used than those that were identified and assessed in the study. In support of this speculation, none of the consensus panel was able to identify any outcome measures that were considered important but overlooked by the review process.

As was found in the review of trials on aggressive and violent people by Cure *et al.*,[2] there was a large presence of studies from the USA in the current review.

The majority of studies forming the basis for the current review used an RCT methodology. However, the sample of eligible studies was significantly increased by the inclusion of cohort and other comparative designs as long as they consisted of at least a 6-month follow-up and a comparative (intervention versus control) design. This more inclusive approach was adopted to ensure that the review would assess all outcome measures commonly used by or familiar to the forensic mental health community. The common occurrence of non-RCT studies reflects the difficulties of adhering to 'gold-standard' methodological approaches to evaluation in the forensic mental health context. Overall, a typical forensic mental health outcome study would be conducted in the community, with a male adult sample of between 101 and 200 participants who had committed an offence and received cognitive behavioural therapy.

Considering that this review focused on forensic mental health, details of mental health diagnosis in study samples were uncommon. Most attention in studies was given to the offending behaviours. However, even with offence, details were often not specified. Given that this lack of details was very common in the literature, it seemed sensible not to exclude them from analysis, given the focus on quality of outcome measurement rather than details of study samples per se.

In this review of 308 different studies of forensic mental health outcome research, the number of different variables used to assess outcome was very large at 744. A previous review of trials for seriously mentally ill violent offenders identified 345 different measures from 300 trials.[2] The large number of variables used to assess outcomes in forensic mental health research must create problems in terms of comparing results of interventions. It may indeed impede the development of common understanding of the scale and nature of benefits of interventions if there is so little shared and commonly used measures.

A useful typology of outcomes in mental health research in general was produced by Atkisson *et al.*[106] They argued that mental health research needs to be multidimensional in perspective on outcomes, and proposed a fourfold typology of domains as a framework:

1. The clinical domain. Here outcomes are concerned with signs and symptoms of mental illness and health status more broadly including mortality and morbidity.
2. The rehabilitation domain. Here outcomes are focused on adaptation and function, especially in terms of social function (e.g. interpersonal relations, social integration) and instrumental functioning (e.g. problem solving, work, education).
3. The humanitarian domain. This domain would include assessment of outcomes in terms of quality of life and well-being, and experiences of and satisfaction with services.
4. The public safety domain. This domain is concerned with societal rights to public safety and the balance between individual rights and community perceptions of safety.

In an overview of policy and research in forensic mental health, Cohen and Eastman[107] expressed the view that the majority of forensic mental health research focused on outcomes in the fourth domain, described by Atkisson *et al.*[106] as public safety. In particular, they argued that there was substantial focus on outcomes in terms of recidivism, especially with regard to re-arrest and reconviction rates.

The current review provides clear evidence to support the view expressed by Cohen and Eastman. Recidivism is by far the most commonly measured domain used to assess outcomes in forensic mental health research; either explicitly identified as recidivism (non-violent, violent or sexual) or implicitly focused on recidivism in terms of substance abuse. Cohen and Eastman[107] argue that the focus on recidivism results in neglect of the clinical, rehabilitation and humanitarian domains of forensic mental health. Indeed they argue more controversially that the degree of emphasis upon public safety reinforces a 'separatist' tendency in forensic mental health research in relation to general mental health research.

The review has found an enormous range of variables used to assess recidivism. This reflects the diversity of target groups and interventions; service and system context of trials; varying emphases on arrest, conviction or imprisonment; considerations such as duration of follow-up; and varying types of evidence from self-report through varying criminal justice sources of data. This variety does not jeopardise the internal validity of studies but does make comparative or meta-analytic research more challenging, particularly where recidivism with varying degrees of severity is involved.

The vast array of recidivism outcome measures displayed in this review illustrates the problems posed for comparison of results between different studies. Clearly, the term recidivism is not sharply defined and operationalised, ranging from offending behaviour, through parole violations to incarceration. Falshaw *et al.*[108] provided a practical example of the problems for comparison of different measures of recidivism. They found that the rate of recidivism increased by a factor of 5.3 when measured by any offence-related behaviour in treatment programme files in sexual offenders compared with measuring reconviction using the Home Office Offenders Index database. Similarly, a study in the USA showed major differences in the estimated rate of violent sexual offence depending on which official criminal record was used.[109] Grann *et al.*[110] expressed concern about the continued practice in forensic mental health research of 'lumping' together behaviours of extremely different levels of seriousness into outcome measures of recidivism.

The next most frequently used variables to assess outcomes were a variety of measures of mental health and cognitive or psychological function, reflecting the distinctive needs and forms of intervention most likely to be encountered in a mental health population. As will be discussed below, only a small number of such measures were used with any frequency. The wide array of scales to assess mental health has already been commented upon and was noted by Cure *et al.*[2] This extreme diversity of instruments in use to assess mental health does not facilitate the emergence of shared understanding of the effectiveness of forensic mental health interventions.

Few studies in the database were found to assess broader aspects of health status, well-being, social function and quality of life. The consensus panel stated that many potentially important domains of outcome appear neglected in evaluative studies. Although a number of such measures have been developed and validated and provide multidimensional measures of outcome from the respondent's perspective, they have not been taken

up in forensic mental health research. This is not entirely surprising as the same is true for mental health research generally as well as for routine practice where patient-reported outcome measures have not been widely adopted.[111]

Studies involving cost-effectiveness methods and outcomes were also uncommon. Given potential opportunities for cost savings from, for example, prevention of institutionalised custody or care of mentally offenders, it is surprising that health economic methods have not been more widely adopted in research in this field.

The review set out, where feasible, to assess the measurement properties of outcome measures that were used with any degree of frequency in forensic mental health research. With regard to specific outcome instruments, a cut-off was set that the research team would examine in more detail any instrument that emerged from the review as having been used in at least five separate studies in the database. Only nine instruments were found that fulfilled this requirement. This is evidence in another form of the extent to which the field of forensic mental health research lacks outcome instruments that are commonly enough used that the forensic mental health community would be familiar with the instruments and be readily able to interpret their results.

Three measures assessing broad aspects of mental health were found that were used with a reasonable level of frequency in the sample of studies – the BDI, the BPRS and the SCL-90-R. These are widely used measures of dimensions of mental health in the broader area of mental health research and have been satisfactorily assessed (especially the BDI and the BPRS) for measurement properties in that wider context. It is not surprising that these were the three outcome measures that were known to the consensus group, and were the only measures that were scored consistently positively by the consensus panel for relevance, feasibility and adequacy of measurement properties for forensic mental health research.

In addition, the ASI emerged as a commonly used measure of outcome for addiction interventions with significant supportive evidence for its measurement properties and moderately consistent support from the consensus panel's ratings. It is reported to require a trained interviewer and nearly an hour to administer, so may only marginally qualify as an instrument to be thought of as feasible for large-scale use in pragmatic trials.

Some other instruments have good supportive evidence for use in very specialist contexts, e.g. the CBCL to assess delinquent behaviours in children. Otherwise, instruments that emerged from the literature review were very poorly supported for measurement properties (e.g. the RBPC) or very specialist in their range of application, e.g. the FACES to assess family cohesion. The panel were not very supportive of the role of such instruments in forensic mental health research.

In view of the paucity of robust outcome measures emerging from the literature review, the database of studies was re-examined with a lower threshold; in this second review, outcome measures were now examined if at least three studies were found to use an instrument. This reanalysis did not yield a single instrument that had been highlighted as promising in the discussion of the consensus meeting. This check on the database strengthened the confidence of the research group that no major source of evidence had been omitted.

It is in the nature of reviews to look backwards. What is largely missing from the review is any substantial evidence of recent debates in forensic mental health research about risk assessment tools. They have not featured as outcomes in trials or evaluative research to any significant degree. Some commentators are beginning to raise questions as to whether approaches to assessing risk of violence have a greater role in evaluative research.[110,112] They were cited by members of the consensus panel as promising for use in evaluative research.

Partly in response to public disquiet and clamour for better decisions about potentially dangerous mental health clients, a large amount of effort has gone into research to better predict individuals who are more at risk of future violent behaviour in forensic mental health services. Risk models partly comprise static variables that may predict violence, for example, demographic or socioeconomic variables. They also include more dynamic variables, for example, attitudes, orientation and treatment engagement, that may also be predictive of violence. These dynamic variables, because they can and do change, are of particular interest because they may not only be predictive of violence, but may also be responsive to interventions. Crucially, they would be of greatest interest if they respond to interventions and are causally associated with subsequent reduction in violent behaviour in a causal chain.[113] The evidence informing this area of forensic mental health research is complex and is still a work in progress.

There are competing instruments the relative merits of which are as yet unclear, including the HCR-20, the Level of Service Inventory-Revised, the Violence Risk Scale, the Structured Outcome Assessment and Community Risk Monitoring. Similarly, it is far from clear which specific dynamic risk factors are critical in the causal chain; candidates include impulsiveness, antisocial attitudes, substance abuse and treatment provider alliance.

This array of constructs and measures offers significant potential for targeting of interventions, for monitoring changes over time in key causal variables and ultimately having a positive impact on violent and serious criminal behaviours. There is growing evidence of their translation across from US to UK settings and of their validity to UK populations in terms of observational predictive applications.[114,115] However, there is a dearth of research using such instruments as outcome measures in trials, and the design and conduct of such studies are likely to be highly challenging.[116] Small numbers of eligible subjects and logistical difficulties of mounting multicentre RCTs in settings focused on security are among more obvious difficulties.

Chapter 5
Conclusions and recommendations

A wide range of domains are relevant to assessing outcomes of interventions in forensic mental health services. Evaluations need to take account of public safety, but also clinical, rehabilitation and humanitarian outcomes. To date, research has focused extensively on the first domain, evaluating outcomes in terms of recidivism.

Recidivism is a very high priority; the public expects interventions that will reduce future criminal behaviour. The very wide range of variables used to assess recidivism makes it difficult to draw conclusions across studies using different variables. It is difficult to see how complete standardisation of measures can be achieved given the enormous variation over time and across countries in systems of criminal justice. However, it is conceivable that more research could be productive to address the heterogeneity of seriousness of forms of recidivism in outcome measurement. Research to assess the validity of self-report measures of recidivism is another priority.

Mental health is clearly also an important dimension of outcome. Instruments have been used in forensic mental health research that have been well validated in the context of general mental health research. Much of the evidence of their use is based on studies carried out in the USA, so that it is not always clear that evidence of performance can be translated automatically to apply to their use in the context of the UK.

The review provides clear support for the view that domains such as quality of life, social function and psychosocial adjustment have not been extensively employed in forensic mental health research but are relevant and important issues. These are important domains for forensic mental health research, and the role of such instruments needs more consideration. Research is needed in these domains to complement the evidence base of outcomes in terms of public safety and mental health.

The wide array and diversity of measures used in forensic mental health research suggest that there is still substantial scope for standardisation, by further use of consensus-type processes to identify domains and specific measures that are relevant and familiar in practice and can be more widely used in evaluative research.

The role of instruments assessing dynamic aspects of risk of violence offer a particular opportunity. They are becoming more widely known in practice. There is growing confidence in their role in predicting the risk of subsequent offending and other key outcomes. There is a lack of any evidence to recommend that any particular measures of risk could also be used as outcome measures, but it should be a priority for the field to apply and assess their potential in a longitudinal context for the purposes of evaluative research.

Acknowledgements

The authors wish to thank the contributors to the consensus process: Richard Benson, Danny Clarke, Simon Draycott, Connor Duggan, Cathriona Hynes, James McGuire, Maria Leitner and Caroline Logan.

Financial support from the NHS Research & Development Methodology programme is also gratefully acknowledged.

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References

1. Cohen A, Eastman N. Needs assessment for mentally disordered offenders: measurement of 'ability to benefit' and outcome. *Br J Psychiatry* 2000;**177**:493–8.

2. Cure S, Chua WL, Duggan L, Adams C. Randomised controlled trials relevant to aggressive and violent people, 1955–2000: a survey. *Br J Psychiatry* 2005;**186**:185–9.

3. Milton J. A postal survey of the assessment procedure for personality disorder in forensic settings. *Psychiatr Bull* 2000;**24**:254–7.

4. McMurran M. *Personality Disorders. NHS National Programme on Forensic Mental Health Research and Development* 2002. URL: www.pdprogramme.org.uk/assets/resources/84.pdf (accessed 12 December 2009).

5. Thornley B, Adams C. Content and quality of 2000 controlled trials in schizophrenia over 50 years. *BMJ* 1998;**317**:1181–4.

6. Marshall M, Lockwood A, Bradley C, Adams CE, Joy C, Fenton M. Unpublished rating scales: a major source of bias in randomised controlled trials of schizophrenia. *Br J Psychiatry* 2000;**176**:249–52.

7. Hanson K, Bussiere M. Predicting relapse: a meta-analysis of sexual offender recidivism studies. *J Consult Clin Psychol* 1998;**66**:348–62.

8. Mulvey EP, Shaw E, Lidz CW. Why use multiple sources in research on patient violence in the community? *Crim Behav Ment Health* 1994;**4**:253–8.

9. Steadman HJ, Mulvey EP, Monahan J, Robbins PC, Appelbaum PS, Grisso T, *et al*. Violence by people discharged from acute psychiatric inpatient facilities and by others in the same neighbourhoods. *Arch Gen Psychiatry* 1998;**55**:393–401.

10. Arseneault L, Moffitt T, Caspi A, Taylor P, Silva P. Mental disorders and violence in a total birth cohort. *Arch Gen Psychiatry* 2000;**57**:979–86.

11. Boers M, Brooks P, Simon L, Strand V, Tugwell P. OMERACT: an international initiative to improve outcome measurement in rheumatology. *Clin Exp Rheumatol* 2005;**23**:10–13.

12. Slade M, Thornicroft G, Glover G. The feasibility of routine outcome measures in mental health. *Soc Psychiatry Psychiatr Epidemiol* 1999;**34**:243–9.

13. McLellan AT, Luborsky L, Woody GE, O'Brien CP. An improved diagnostic evaluation instrument for substance abuse patients. The Addiction Severity Index. *J Nerv Ment Dis* 1980;**168**:26–33.

14. McLellan AT. The fifth edition of the Addiction Severity Index. *J Subst Abuse Treat* 1992;**9**:199–213.

15. Amoureus MPSR. The Addiction Severity Index in penitentiaries. *Int J Offender Ther Comp Criminol* 1994;**38**:309–18.

16. Wexler MK, Falkin GP, Lipton DS. *A model prison rehabilitation program. An evaluation of the stay'n out therapeutic community.* New York, NY: NDRI Press; 1988.

17. Argeriou M, McCarty D, Daley M. Use of the Addiction Severity Index with homeless substance abusers. *J Subst Abuse Treat* 1993;**11**:359–65.

18. Hodgins DC, El-Guebaly N. More data on the Addiction Severity Index: Reliability and validity with the mentally ill substance abuser. *J Nerv Ment Dis* 1992;**180**:197–201.

19. Leonhard C, Mulvey K, Gastfriend DR, Shwartz M. The Addiction Severity Index a field study of internal consistency and validity. *J Subst Abuse Treat* 2000;**18**:129–35.

20. Rikoon SH, Cacciola JS. Predicting DSM-IV dependence diagnoses from Addiction Severity Index composite scores. *J Subst Abuse Treat* 2006;**31**:12–24.

21. McDermott PA, Alterman AI, Brown L, Zaballero AR, Snider EC, McKay JR. Construct refinement and confirmation for the Addiction Severity Index. *Psychol Assess* 1996;**8**:182–9.

22. Alterman AI, McDermott PA, Cook TG, Metzger D, Rutherford MJ, Cacciola JS, Brown LS. New scales to assess change in the Addiction Severity Index for the opioid, cocaine, and alcohol dependent. *Psychol Addict Behav* 1998;**12**:233–46.

23. Hendricks VM, Kaplan CD, van Limbeek J, Geerlings P. The Addiction Severity Index: Reliability and validity in a Dutch addict population. *J Subst Abuse Treat* 1989;**6**:133–141.

24. Brochu S, Guyon L. An Addiction Severity Index for inmates. *Int Med J* 1995;**2**:54–8.

25. Nunnally JC. *Psychometric theory*. New York, NY: McGraw-Hill; 1967.

26. Greenfeld LA. *Alcohol and crime: An analysis of national data on the prevalence of alcohol involvement in crime*. Washington, DC: Bureau Justice of Statistics, US Department of Justice; 1998.

27. Collins JJ. Alcohol and interpersonal violence. In: Weiner NA, Wolfgang ME, editors. *Pathways to criminal violence*. Thousand Oaks, CA: Sage Publications; 1989.

28. Beck AT, Ward CH, Mendelson M, Mock J, Erbaugh J. An inventory for measuring depression. *Arch Gen Psychiatry* 1961;**4**:561–71.

29. Richter P, Werner J, Heerlein A, Kraus A, Sauer H. On the validity of the Beck Depression Inventory. A review. *Psychopathology* 1998;**31**:160–8.

30. Beck AT, Steer RA. *Beck Depression Inventory, Revised Edition (BDI)*. San Antonio, TX: The Psychological Corporation; 1971.

31. Beck AT. Psychometric properties of the Beck Depression Inventory: Twenty-five years of evaluation. *Clin Psychol Rev* 1988;**8**:98–100.

32. Beck AT, Lester D. Components of depression in attempted suicides. *J Psychol* 1973;**85**:257–60.

33. Tanaka JS, Huba GJ. Confirmatory hierarchical factor analysis of psychological distress measures. *J Pers Soc Psychol* 1984;**46**:621–35.

34. Giambra LM. Independent dimension of depression: A factor analysis of three self-report depression measures. *J Clin Psychol* 1977;**33**:928–35.

35. Scott NA, Hannum TE, Christ SL. Assessment of depression among incarcerated females. *J Pers Assess* 1982;**46**:372–9.

36. Boothby JL, Durham TW. Screening for depression in prisoners using the Beck Depression Inventory. *Crim Justice Behav* 1999;**26**:107–24.

37. Howells K, Day A. Affective determinants of treatment engagement in violent offenders. *Int J Offender Ther Comp Criminol* 2006;**50**:174–86.

38. Overall JE, Gorham DR. The Brief Psychiatric Rating Scale. *Psychol Rep* 1962;**10**:799–812.

39. Ventura J, Green MF, Shaner A, Liberman RP. Training and quality assurance with the Brief Psychiatric Rating Scale: 'The Drift Busters.' *Int J Methods Psychiatr Res* 1993;**3**:221–44.

40. Lorr M, Klett CJ, McNair DM, Lasky JJ. *Inpatient multidimensional psychiatric scale manual*. Palo Alto, CA: Consulting Psychologists Press; 1962.

41. Overall JE. The Brief Psychiatric Rating Scale in psychopharmacology research. In: Pichot P, editor. *Psychological measurements in psychopharmacology: Modern problems in pharmacopsychiatry*. Paris: Karger, Basel; 1974.

42. Lukoff D, Nuechterlein KH, Ventura J. Manual for the Brief Psychiatric Rating Scale (BPRS). *Schizophr Bull* 1986;**12**:594–602.

43. Woerner MG, Mannuzza S, Kane JM. Anchoring the BPRS: An aid to improved reliability. *Psychopharmacol Bull* 1988;**24**:112–17.

44. Panos PT. The validation of the factor structure of the Brief Psychiatric Rating Scale-Expanded Version (BPRS-E) with geriatric and nongeriatric psychiatric inpatients. *Res Soc Work Pract* 2004;**14**:170–80.

45. Joint Commission on Accreditation of Healthcare Organizations (JCAHO). *Joint Commission on Accreditation of Healthcare Organizations*. Washington, DC: 2001.

46. Lachar D, Bailley SE, Rhoades HM, Espadas A, Aponte M, Cowan KA, *et al*. New subscales for an anchored version of the Brief Psychiatric Rating Scale: construction, reliability, and validity in acute psychiatric admissions. *Psychol Assess* 2001;**13**:384–95.

47. Hedlund JL, Vieweg BW. The Brief Psychiatric Rating Scale: A comprehensive review. *J Oper Psychiatry* 1980;**11**:48–65.

48. Corrado RR, Cohen IM, Hart SD, Roesch R. Diagnosing mental disorders in offenders: Conceptual and methodological issues. *Crim Behav Ment Health* 2000;**10**:29–39.

49. Greenwood A. Validity of the Brief Psychiatric Rating Scale within a forensic inpatient hospital. *Exp Evid* 2002;**8**:2001–30.

50. Gray NS, Hill C, McGleish A, Timmons D, MacCulloch MJ, Snowden RJ, *et al*. Prediction of violence and self-harm in mentally disordered

offenders: a prospective study of the efficacy of HCR-20, PCL-R, and psychiatric symptomatology. *J Consult Clin Psychol* 2003;**71**:443–51.

51. Robins LN, Helzer JE. *Diagnostic Interview Schedule (DIS), Version III-A*. Washington, DC: Department of Psychitary, Washington University School of Medicine; 1985.

52. Achenbach TM, Edelbrock C. *Manual for the Child Behavior Checklist and Revised Child Behavior Profile*. Burlington, MA: University of Vermont, Department of Psychiatry;1983.

53. Brown A, Achenbach TM. *Bibliography of published studies using the Child Behavior Checklist and related materials*: *1993 Edition*. Burlington, MA: University of Vermont; 1993.

54. Alfons AM, Crijen AA, Achenbach TM, Verhulst FC. Problems reported by parents of children in multiple cultures: the Child Behavior Checklist syndrome constructs. *Am J Psychiatry* 1999;**156**:569–74.

55. Dutra L, Campbell L, Westen D. Quantifying clinical judgment in the assessment of adolescent psychopathology: Reliability, validity, and factor structure of the Child Behavior Checklist for clinician report. *J Clin Psychol* 2004;**60**:65–85.

56. Embregts PJ, Embregts PJ. Reliability of the Child Behavior Checklist for the assessment of behavioral problems of children and youth with mild mental retardation. *Res Dev Disabil* 2000;**21**:31–41.

57. Crawford L. Test-retest reliability of the Child Behavior Checklist ages 2–3. *Psychol Rep* 1991;**69**:488–98.

58. Macmann GM. Construct validity of the Child Behavior Checklist: Effects of item overlap on second-order factor structure. *Psychol Assess* 1992;**4**:110–16.

59. Nelson EC, Hanna GL, Hudzaik JJ, Botteron KN, Heath AC, Todd RD. Obsessive-compulsive scale of the Child Behavior Checklist: specificity, sensitivity, and predictive power. *Pediatrics* 2001;**108**:396–401.

60. Wolfe VV, Michienzi T, Sirles E, Evans B. The impact of sexual abuse on children: A PTSD formulation. *Behav Ther* 1989;**20**:215–28.

61. Straus MA. Measuring intrafamily conflict and violence: The Conflict Tactics Scales. *J Marriage Fam* 1979;**41**:75–88.

62. Straus MA, Hamby SL, Boney-McCoy S, Sugarman DB. The Revised Conflict Tactics Scales (CTS2). *J Fam Issues* 1996;**17**:283–316.

63. Archer J. Assessment of the Reliability of the Conflict Tactics Scales. *J Interpers Violence* 1999;**14**:1263–89.

64. Schafer J. Measuring spousal violence with the Conflict Tactics Scale: Notes on reliability and validity issues. *J Interpers Violence* 1996;**11**:570–85.

65. Browning J. Assessment of wife assault with the Conflict Tactics Scale: Using couple data to quantify the differential reporting effect. *J Marriage Fam* 1986;**48**:360–79.

66. Jones NT, Ji P, Beck M, Beck N. The reliability and validity of the Revised Conflict Tactics Scale (CTS2) in a female incarcerated population. *J Fam Issues* 2002;**23**:441–57.

67. Beck M, Beck N. *The Abusive Behaviour Checklist*. 1998; unpublished instrument.

68. Cascardi M, Avery-Leaf S, O'Leary KD, Smith SAM. Factor structure and convergent validity of the Conflict Tactics Scale in high school students. *Psychol Assess* 1999;**11**:546–55.

69. Pan HS, Neidig P. Male and female aggressor victim differences in the factor structure of the Modified Conflict Tactics Scale. *J Interpers Violence* 1995;**9**:366–82.

70. Barriga AQ, Gibbs JC. Measuring cognitive distortion in antisocial youth: Development and preliminary validation of the "How I Think" questionnaire. *Aggress Behav* 1996;**22**:333–43

71. Olsen DH, Sprenkle DH, Russell CRS. Circumplex model of marital and family systems I. Cohesion and adaptability dimensions, family types, and clinical applications. *Fam Process* 1979;**18**:3–28.

72. Green RG, Harris RN, Forte JA. Evaluating FACES III and the Circumplex model: 2240 families. *Fam Process* 1991;**30**:55–73.

73. Martinez-Pampliega A, Iraurgi L, Galindez E, Sanz M. Family Adaptability and Cohesion Evaluation Scale (FACES): Development of a Spanish version of 20 items. *Int J Clin Health Psychol* 2006;**6**:330–8.

74. Place M, Hulsmeier J, Brownrigg A, Soulsby A. The Family Adaptability and Cohesion Evaluation Scale (FACES): An instrument worthy of rehabilitation? *Psychiatr Bull* 2005;**29**:1–6.

75. Alexander BB, Johnson SB, Carter RL. A psychometric study of the family adaptability and cohesion evaluation scales. *J Abnorm Child Psychol* 1984;**12**:199–207.

76. Rodick JD, Henggeler SW, Hanson CL. An evaluation of the Family Adaptability and Cohesion Evaluation Scales and the Circumplex Model. *J Abnorm Child Psychol* 1986;**14**:77–87.

77. Kusada H. The reliability and validity of Family Adaptability and Cohesion Evaluation Scales FACES III for Japanese Ss. *Jpn J Counsel Sci* 1997;**28**:155–62.

78. Quay HC. Measuring dimensions of deviant behavior: The Behavior Problem Checklist. *J Abnorm Child Psychol* 1977;**5**:277–87.

79. Hinshaw SP, Morrison DC, Carte ET, Cornsweet C. Factorial dimensions of the Revised Behavior Problem Checklist: replication and validation within a kindergarten sample. *J Abnorm Child Psychol* 1987;**15**:309–27.

80. Quay HC, Peterson DR. *Interim manual for the Revised Behavior Problem Checklist.*1st edition. Miami, FL: University of Miami; 1983.

81. Hogan AE, Quay H. Revised Behavior Problem Checklist: Stability, prevalence, and incidence of behavior problems in kindergarten and first-grade children. *Psychol Assess* 1989;**1**:102–11.

82. Quay HC, Peterson DR. *Appendix I to the interim manul for the Revised Behavior Problem Checklist.* 1st edition. Miami, FL: University of Miami; 1985.

83. Armistead L, Wierson M, Forehand R, Frame C. Psychopathology in incarcerated juvenile delinquents: does it extend beyond externalising problems? *Adolescence* 1992;**27**:309–14.

84. Derogatis LR. *SCL-90-R Administration, Scoring and Procedures*. Baltimore, MD: Clinical Psychometric Research; 1977.

85. Mattsson NB, Williams HV, Rickels K, Lipman RS, Uhlenhuth EH. Dimensions of symptom distress in anxious neurotic outpatients. *Psychopharmacol Bull* 1969;**5**:19–32.

86. Derogatis LR, Lipman RS, Covi L. SCL-90: An outpatient psychiatric rating scale – preliminary report. *Psychopharmacol Bull* 1973;**9**:13–28.

87. Derogatis LR, Lipman RS, Rickels K, Uhlenhuth EH, Covi I. The Hopkins Symptom Checklist (HSCL) a self-report symptom inventory. *Behav Sci* 1974;**19**:1–15.

88. Derogatis LR, Rickels K, Rock AF. The SCL-90 and the MMPI: a step in the validation of a new self-report scale. *Br J Psychiatry* 1976;**128**:280–9.

89. Schmitz N, Kruse J, Heckrath C, Alberti L, Tress W. Computerized administration of the Symptom Checklist (SCL-90-R) and the Inventory of Interpersonal Problems (IIP-C) in psychosomatic outpatients. *Psychiatry Res* 1999;**87**:2–3.

90. Lipman RS, Covi L, Shapiro AK. The Hopkins Symptom Checklist (HSCL) – factors derived from the HSCL-90. *J Affect Disord* 1979;**1**:9–24.

91. Hoffman NG, Overall PB. Factor structure of the SCL-90 in a psychiatric population. *J Consult Clin Psychol* 1978;**46**:1187–91.

92. Cyr JJ, McKenna-Foley JM, Peacock E. Factor Structure of the SCL-90-R: Is there one? *J Pers Assess* 1985;**49**:571–8.

93. Wilson JH, Taylor PJ, Robertson G. The validity of the SCL-90 in a sample of British men remanded to prison for psychiatric reports. *Br J Psychiatry* 1985;**147**:400–3.

94. Elliott DS, Ageton S. Reconciling race and class differences in self-reported and official estimates of delinquency. *Am Sociol Rev* 1980;**45**:95–110.

95. Elliott DS, Huizinga D. Social class and delinquent behavior in a national youth panel. *Criminology* 1983;**21**:167–77.

96. Huizinga D, Elliot DS. Reassessing the reliability and validity of self-report delinquency measures. *J Quant Criminol* 1986;**2**:315–27.

97. Thornberry TP, Krohn MD. The self-report method for measuring delinquency and crime. *Crim Justice* 2000;**4**:33–83.

98. Walters GD. The psychological inventory of criminal thinking styles Part I: reliability and preliminary validity. *Crim Justice Behav* 1995;**22**:307–25.

99. Ribner S, Chein I. The Anti-Social Activities Attitude Scale. *Adolescence* 1979;**14**:421–6.

100. Witte TD, Di Placido C, Gu DQ, Wong SCP. An investigation of the validity and reliability of the in a sample of treated sex offenders. *Sex Abuse* 2006;**18**:249–58.

101. Patton JH, Standford MS, Barratt ES. Factor structure of the Barratt impulsiveness scale. *J Clin Psychol* 1995;**5**:768–74.

102. Novaco RW. *The Novaco Anger Scale (September 1991 Version)*. Irvine, CA: University of California; 1991.

103. Loza W, Green K. The Self-Appraisal Questionnaire: a self-report measure for predicting recidivism versus clinician-administered measures: a 5-year follow-up study. *J Interpers Violence* 2003;**18**:781–97.

104. Webster CD, Douglas KS, Eaves D, Hart SD. *HCR-20: Assessing risk for violence* (Version 2). Vancouver, British Columbia: Simon Fraser University; 1997.

105. Wong S, Gordon A. *Violence Risk Scale*. Saskatoon, Saskatchewan: Regional Psychiatric Centre; 2000.

106. Atkisson C, Cook J, Karno M. Clinical services research. *Schizophr Bull* 1992;**18**:561–626.

107. Cohen A, Eastman N. *Assessing Forensic Mental Health Need.* London: Gaskell; 2000.

108. Falshaw L, Bates A, Patel V. Assessing reconviction, reoffending and recidivism in a sample of UK sexual offenders. *Legal and Criminological Psychology* 2003;**8**:207–15.

109. Rice M, Harris G, Lang C, Cornier C. Violent sex offenses: how are they best measured from official records? *Law Hum Behav* 2006;**30**:525–41.

110. Grann M, Sturidsson K, Haggard-Grann U, Hiscoke U, Alm P, Dernevik M, *et al*. Methodological development: structured outcome assessment and community risk monitoring (SORM) *Int J Law Psychiatry* 2005;**28**:442–56.

111. Gilbody S, House A, Sheldon T. Psychiatrists in the UK do not use outcome measures. *Br J Psychiatry* 2002;**180**:101–3.

112. Langton C. Assessment implications of 'what works' research for dangerous and severe personality disorder (DSPD) service evaluation. *Psychol Crime Law* 2007;**13**:97–111.

113. Douglas K, Skeem J. Violence risk assessment: getting specific about being dynamic. *Psychol Public Policy Law* 2005;**11**:347–83.

114. Doyle M, Dolan M. Predicting community violence from patients discharged from mental health services. *Br J Psychiatry* 2006;**189**:520–6.

115. Snowden R, Gray N, Taylor J, Macculloch M. Actuarial prediction of violent recidivism in mentally disordered offenders. *Psychol Med* 2007;**31**:1–11.

116. Lindqvist P, Skipworth J. Evidence-based rehabilitation in forensic psychiatry. *Br J Psychiatry* 2000;**176**:220–3.

Appendix 1

Search strategies by database

CINAHL

1 (convict$or crimin$or delinquen$or felon$or incarcerat$or inmate$or offend$or parole$).mp. [mp=title, subject heading word, abstract, instrumentation]
2 (borstal$or gaol$or jail$or penal or penol$or penitentia$or prison$or probation$or remand$).mp. [mp=title, subject heading word, abstract, instrumentation]
3 boot camp$.mp. [mp=title, subject heading word, abstract, instrumentation]
4 (communit$adj2 correction$).mp. [mp=title, subject heading word, abstract, instrumentation]
5 (correction$adj3 (program$or facilit$or service$)).mp. [mp=title, subject heading word, abstract, instrumentation]
6 correctional$.mp. [mp=title, subject heading word, abstract, instrumentation]
7 (forensic adj3 (unit$or hospital$)).mp. [mp=title, subject heading word, abstract, instrumentation]
8 detention cent$.mp. [mp=title, subject heading word, abstract, instrumentation]
9 (secure adj2 (hospital$or institut$or unit$or training cent$or facilit$)).mp. [mp=title, subject heading word, abstract, instrumentation]
10 therapeut$communit$.mp. [mp=title, subject heading word, abstract, instrumentation]
11 youth custod$.mp. [mp=title, subject heading word, abstract, instrumentation]
12 young offen$.mp. [mp=title, subject heading word, abstract, instrumentation]
13 exp Prisoners/
14 exp Public Offenders/
15 exp Correctional Facilities/
16 or/1–15
17 ((cohort or follow up or follow?up or longitudinal or prospective or retrospective or case control or case?control) adj stud$).mp. [mp=title, subject heading word, abstract, instrumentation]
18 ((singl$or doubl$or trebl$or tripl$) adj (blind$or mask$)).mp. [mp=title, subject heading word, abstract, instrumentation]
19 randomi$.mp. [mp=title, subject heading word, abstract, instrumentation]
20 (random$adj (allocat$or assign$or mask$)).mp. [mp=title, subject heading word, abstract, instrumentation]
21 ((cross over or cross?over) adj stud$).mp. [mp=title, subject heading word, abstract, instrumentation]
22 placebo$.mp. [mp=title, subject heading word, abstract, instrumentation]
23 repeat$measure$.mp. [mp=title, subject heading word, abstract, instrumentation]
24 exp Crossover Design/
25 exp Clinical Trials/
26 exp Prospective Studies/
27 exp Repeated Measures/
28 exp nonrandomized trials/or exp pretest-posttest design/
29 exp Meta Analysis/
30 exp "Systematic Review"/
31 or/17–30
32 31 and 16

Cochrane

1 (convict* or crimin* or delinquen* or felon* or incarcerat* or inmate* or offend* or parole*):ti,ab,kw or (borstal* or gaol* or jail* or penal or penol* or penitentia* or prison* or probation* or remand*):ti,ab,kw
2 (borstal* or gaol* or jail* or penal or penol* or penitentia* or prison* or probation* or remand*):ti,ab,kw
3 (boot camp* or correctional* or detention cent*):ti,ab,kw
4 (communit* near correction*):ti,ab,kw
5 (correction* near (program* or facilit* or service*)):ti,ab,kw
6 (forensic near (unit* or hospital*)):ti,ab,kw
7 (secure near (hospital* or institut* or unit*)):ti,ab,kw
8 (youth custod*):ti,ab,kw
9 (youth offend*):ti,ab,kw
10 MeSH descriptor Prisoners, this term only
11 (1 OR 2 OR 3 OR 4 OR 5 OR 6 OR 7 OR 8 OR 9 OR 10)

EMBASE

1 (convict$or crimin$or delinquen$or felon$or incarcerat$or inmate$or offend$or parole$).mp. [mp=title, abstract, subject headings, heading word, drug trade name, original title, device manufacturer, drug manufacturer name]
2 (borstal$or gaol$or jail$or penal or penol$or penitentia$or prison$or probation$or remand$).mp. [mp=title, abstract, subject headings, heading word, drug trade name, original title, device manufacturer, drug manufacturer name]
3 boot camp$.mp. [mp=title, abstract, subject headings, heading word, drug trade name, original title, device manufacturer, drug manufacturer name]
4 (communit$adj2 correction$).mp. [mp=title, abstract, subject headings, heading word, drug trade name, original title, device manufacturer, drug manufacturer name]
5 (correction$adj3 (program$or facilit$or service$)).mp. [mp=title, abstract, subject headings, heading word, drug trade name, original title, device manufacturer, drug manufacturer name]
6 correctional$.mp. [mp=title, abstract, subject headings, heading word, drug trade name, original title, device manufacturer, drug manufacturer name]
7 (forensic adj3 (unit$or hospital$)).mp. [mp=title, abstract, subject headings, heading word, drug trade name, original title, device manufacturer, drug manufacturer name]
8 detention cent$.mp. [mp=title, abstract, subject headings, heading word, drug trade name, original title, device manufacturer, drug manufacturer name]
9 (secure adj2 (hospital$or institut$or unit$or training cent$or facilit$)).mp. [mp=title, abstract, subject headings, heading word, drug trade name, original title, device manufacturer, drug manufacturer name]
10 therapeut$communit$.mp. [mp=title, abstract, subject headings, heading word, drug trade name, original title, device manufacturer, drug manufacturer name]
11 youth custod$.mp. [mp=title, abstract, subject headings, heading word, drug trade name, original title, device manufacturer, drug manufacturer name]
12 young offen$.mp. [mp=title, abstract, subject headings, heading word, drug trade name, original title, device manufacturer, drug manufacturer name]
13 exp offender/
14 exp prisoner/
15 exp custody/or exp detention/or exp prison/or exp probation/
16 exp Criminal Justice/or exp custody/
17 or/1–16
18 ((cohort or follow up or follow?up or longitudinal or prospective or retrospective or case control or case?control) adj stud$).mp. [mp=title, abstract, subject headings, heading word, drug trade name, original title, device manufacturer, drug manufacturer name]
19 ((singl$or doubl$or trebl$or tripl$) adj (blind$or mask$)).mp. [mp=title, abstract, subject headings, heading word, drug trade name, original title, device manufacturer, drug manufacturer name]
20 randomi$.mp. [mp=title, abstract, subject headings, heading word, drug trade name, original title, device manufacturer, drug manufacturer name]
21 (random$adj (assign$or mask$or allocat$)).mp. [mp=title, abstract, subject headings, heading word, drug trade name, original title, device manufacturer, drug manufacturer name]
22 ((cross over or cross?over) adj stud$).mp. [mp=title, abstract, subject headings, heading word, drug trade name, original title, device manufacturer, drug manufacturer name]
23 (placebo$or repeat$measure$).mp. [mp=title, abstract, subject headings, heading word, drug trade name, original title, device manufacturer, drug manufacturer name]
24 exp cohort analysis/
25 exp case control study/or exp longitudinal study/or exp prospective study/or exp retrospective study/
26 exp crossover procedure/or exp double blind procedure/or exp single blind procedure/or exp randomized controlled trial/
27 exp meta analysis/or exp "systematic review"/
28 exp clinical trial/or exp multicenter study/or exp phase 1 clinical trial/or exp phase 2 clinical trial/or exp phase 3 clinical trial/or exp phase 4 clinical trial/
29 exp randomized controlled trial/
30 or/18–29
31 17 and 30

MEDLINE

1 (convict$or crimin$or delinquen$or felon$or incarcerat$or inmate$or offend$or parole$).mp. [mp=title, original title, abstract, name of substance word, subject heading word]
2 (borstal$or gaol$or jail$or penal or penol$or penitentia$or prison$or probation$or remand$).mp. [mp=title, original title,

abstract, name of substance word, subject heading word]
3 boot camp$.mp. [mp=title, original title, abstract, name of substance word, subject heading word]
4 (communit$adj2 correction$).mp. [mp=title, original title, abstract, name of substance word, subject heading word]
5 (correction$adj3 (program$or facilit$or service$)).mp. [mp=title, original title, abstract, name of substance word, subject heading word]
6 correctional$.mp. [mp=title, original title, abstract, name of substance word, subject heading word]
7 (forensic adj3 (unit$or hospital$)).mp. [mp=title, original title, abstract, name of substance word, subject heading word]
8 detention cent$.mp. [mp=title, original title, abstract, name of substance word, subject heading word]
9 (secure adj2 (hospital$or institut$or unit$or training cent$or facilit$)).mp. [mp=title, original title, abstract, name of substance word, subject heading word]
10 therapeut$communit$.mp. [mp=title, original title, abstract, name of substance word, subject heading word]
11 youth custod$.mp. [mp=title, original title, abstract, name of substance word, subject heading word]
12 young offen$.mp. [mp=title, original title, abstract, name of substance word, subject heading word]
13 exp Prisoners/
14 Prisons/
15 or/1–14
16 ((cohort or follow up or follow?up or longitudinal or prospective or retrospective or case control or case?control) adj stud$).mp. [mp=title, original title, abstract, name of substance word, subject heading word]
17 ((singl$or doubl$or trebl$or tripl$) adj (blind$or mask$)).mp. [mp=title, original title, abstract, name of substance word, subject heading word]
18 randomi$.mp. [mp=title, original title, abstract, name of substance word, subject heading word]
19 (random$adj (assign$or mask$or allocat$)).mp. [mp=title, original title, abstract, name of substance word, subject heading word]
20 ((cross over or cross?over) adj stud$).mp. [mp=title, original title, abstract, name of substance word, subject heading word]
21 (placebo$or repeat$measure$).mp. [mp=title, original title, abstract, name of substance word, subject heading word]
22 exp case-control studies/or exp cohort studies/
23 exp Clinical Trials/
24 exp intervention studies/
25 exp cross-over studies/or exp double-blind method/or exp matched-pair analysis/or exp meta-analysis/or exp random allocation/or exp single-blind method/
26 or/16–25
27 26 and 15

NCJRS

((KW=(randomi* or placebo*)) or (KW=(repeat* measure*)) or (KW=((singl* or doubl* or trebl* or tripl*) within 2 (blind* or mask*))) or (KW=((cross over or cross-over or crossover) within 2 stud*)) or (KW=(random* within 2 (assign* or allocat*))) or (KW=(clinical* within 2 (trial* or study*))) or (KW=((follow up or follow-up or followup) within 1 stud*)) or (KW=((longitudinal or prospective or retrospective) within 1 stud*)) or (KW=(((case control or case-control or casecontrol) within 1 stud*) or (cohort stud*))) or (KW=(systematic review*)) or (KW=(meta analys* or meta-analys* or metanalys*))) and ((KW=((convict* or crimin* or delinquen*) or (felon* or incarcerat* or inmate*) or (offend* or parole*))) or (KW=((boot camp* or borstal*) or (correctional* or detention cent*) or (gaol* or jail*)) or KW=((penal or penitentia*) or (penol* or prison* or probation*) or (remand* or youth custod*)) or KW=(therapeut* communit*)) or (KW=(communit* within 2 correction*)) or (KW=(correction* within 3 (program* or facilit* or service*))) or (KW=(forensic* within 3 (unit* or hospital*))) or (KW=(secur* within 2 (hospital* or institut* or unit* or training cent* or facilit*))))

PHI

(crimin* or incarcerat* or inmate* or offend* or correctional* or jail* or penal or prison* or remand* or therapeut* or communit*)

PsycINFO

1 (convict$or crimin$or delinquen$or felon$or incarcerat$or inmate$or offend$or parole$).mp. [mp=title, abstract, heading word, table of contents, key concepts]
2 (borstal$or gaol$or jail$or penal or penol$or penitentia$or prison$or probation$or remand$).mp. [mp=title, abstract, heading word, table of contents, key concepts]

3 boot camp$.mp. [mp=title, abstract, heading word, table of contents, key concepts]
4 (communit$adj2 correction$).mp. [mp=title, abstract, heading word, table of contents, key concepts]
5 (correction$adj3 (program$or facilit$or service$)).mp. [mp=title, abstract, heading word, table of contents, key concepts]
6 correctional$.mp. [mp=title, abstract, heading word, table of contents, key concepts]
7 (forensic adj3 (unit$or hospital$)).mp. [mp=title, abstract, heading word, table of contents, key concepts]
8 detention cent$.mp. [mp=title, abstract, heading word, table of contents, key concepts]
9 (secure adj2 (hospital$or institut$or unit$or training cent$or facilit$)).mp. [mp=title, abstract, heading word, table of contents, key concepts]
10 therapeut$communit$.mp. [mp=title, abstract, heading word, table of contents, key concepts]
11 youth custod$.mp. [mp=title, abstract, heading word, table of contents, key concepts]
12 young offen$.mp. [mp=title, abstract, heading word, table of contents, key concepts]
13 exp parole/or exp probation/
14 correctional institutions/or exp prisons/or exp reformatories/or exp halfway houses/or exp maximum security facilities/
15 exp perpetrators/or exp criminals/
16 exp criminals/
17 exp incarceration/
18 or/1–17
19 ((cohort or follow up or follow?up or longitudinal or prospective or retrospective or case control or case?control) adj stud$).mp. [mp=title, abstract, heading word, table of contents, key concepts]
20 ((singl$or doubl$or trebl$or tripl$) adj (blind$or mask$)).mp. [mp=title, abstract, heading word, table of contents, key concepts]
21 randomi$.mp. [mp=title, abstract, heading word, table of contents, key concepts]
22 (random$adj (allocat$or assign$or mask$)). mp. [mp=title, abstract, heading word, table of contents, key concepts]
23 ((cross over or cross?over) adj stud$).mp. [mp=title, abstract, heading word, table of contents, key concepts]
24 placebo$.mp. [mp=title, abstract, heading word, table of contents, key concepts]
25 repeat$measure$.mp. [mp=title, abstract, heading word, table of contents, key concepts]
26 exp cohort analysis/
27 exp clinical trials/
28 exp longitudinal studies/or exp prospective studies/or exp followup studies/or exp retrospective studies/
29 exp meta analysis/
30 exp repeated measures/
31 or/19–30
32 31 and 18

Sociological Abstracts

(((crimin*) or (delinquen*) or (felon*) or (incarcerat*) or (inmate*) or (offend*) or (parole*) or (DE=("offenders" or "career criminals" or "criminally insane" or "drug offenders" or "female offenders" or "juvenile offenders" or "sex offenders")) or (convict*)) or ((boot camp*) or (borstal*) or (communit* within 2 correction*) or (correction* within 3 (program* or facilit* or service*)) or (correctional*) or (detention cent*) or (forensic within 3 (unit* or hospital*)) or (gaol*) or (jail*) or (penal) or (penitentia*) or (penol*) or (prison*) or (probation*) or (remand*) or (secur* within 2 (hospital* or institut* or unit* or training cent* or facilit*)) or (therapeut* communit*) or (youth custod*) or (DE="correctional system") or (DE="imprisonment") or (DE=("juvenile correctional institutions" or "correctional system")) or (DE="parole") or (DE="prisons") or (DE="probation") or (DE="detention"))) and ((randomi*) or (singl* or doubl* or trebl* or tripl* within 2 (blind* or mask*)) or (placebo*) or (crossover or cross over or cross*over or cross?over within 2 stud*) or (random* within 2 (assign* or allocat*)) or (cohort*) or (longitudinal) or (repeat* measure*) or (follow up or follow?up or follow*up) or (prospective) or (retrospective) or (case control or case?control or case*control) or (DE=("cohort analysis")) or (DE=("longitudinal studies")) or (DE=("random samples")))

Appendix 2

Data extraction form

Outcomes in Forensic Mental Health

Administration Details

Paper ID no					**Study no**		**No of studies in paper**	

Extractor initials		*Throughout use:*	888 = not applicable 999 = not stated

Type of report		1 = Journal article 2 = Book/chapter 3 = Conference	4 = Dissertation 5 = Govt. report 6 = Other *(specify)*
Published or not?		0 = no	1 = yes

First author:	
Study name:	
Year of publication:	
(Combine these to give a unique name to the paper)	
Number of studies included in this paper:	
(if more than one, complete separate extraction forms for each, and display study no's above)	
Paper numbers of other studies with which this paper may link: **(if other papers report further results of this trial, incorporate them onto this form and note here what has been done)**	____ ____ ____ ____ ____ ____

Country of origin		1 = USA 2 = Canada 3 = UK & Eire 4= Other European	5 = Mid E/Asia 6 = Africa 7 =Australia/NZ 8 =Latin America

Study Design

Type of study		1 = RCT 2 = Other comparative designs 3 = Cohort study

Study setting

(in full)		1 = Community 2 = Remand 3 = Prison 4 = Probation 5 = Secure forensic hospital 6 = Juvenile centre 7 = therapeutic community 8 = Other *(specify)*

Participants

1. Sample Size

Entire study N	Males %	Males N

2. Age

Adolescent 1 = yes 0 = no	Adult 1 = yes 0 = no

3. Sample criminal and psychiatric history targeted by intervention

Sample characteristics	*Specify*	Coding 1 = yes 0 = no		*Page* *Table no* *Text*
Criminal history	1 = Any offence/felony/not stated			
	2 = Violent offence			
	3 = Sexual offence			
	4 = Property offence			
	5 = Drugs offence/use			
	6 = Driving offence			
	7 = Other *specify*			
Psychiatric diagnosis			**Diagnostic criteria** *specify*	
	1 = Personality disorder			
	2 = Schizophrenia			
	3 = Affective disorder			
	4 = Substance abuse			
	5 = Sexual disorder			
	6 = Behaviour disorder			
	7 = Neurotic problem			
	8 = Organic brain disorder			
	9 = Dementia			
	10 = Other			
Learning disability	1 = IQ below 80			
	2 = Organic brain damage			
	3 = Autism			
	4 = Other			

Intervention

Intervention name	Type of intervention (see coding below)	Page no
1)		
2)		

Intervention type codes

1 = cognitive/behavioural	9 = diet
2 = family therapy	10 = vocational
3 = one to one psychotherapy	11= educational
4 = community penalty	12 = relaxation/meditation
5 = prison penalty	13 = yoga
6 = strict daily regime	14 = therapeutic community
7 = physical training	15 = mental health court
8 = acupuncture	16 = other (*specify)*

Outcome

Outcome measure	**Longest follow-up period for outcome measurement (months)** (over 6 months for non-RCT)	**Modification** 0 = no 1= yes *Specify if yes*	**Page no**
1)			
2)			
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Recidivism Outcome measures

Type of recidivism (i.e. return to prison, conviction, arrest)	**Data source** (i.e. police records, self-report)	**Follow-up periods for outcome measurement (months)** (over 6 months for non-RCT)	**Modification** 0 = no 1= yes *Specify if yes*	**Page no**
1)				
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Any further comments on study

Describe

Appendix 3

Included studies reference list

Akiyama K. Longitudinal clinical course following pharmacological treatment of methamphetamine psychosis which persists after long-term abstinence. *Ann N Y Acad Sci* 2006;**1074**:125–34.

Alemi F, Taxman F, Baghi H, Vang J, Thanner M, Doyon V. Costs and benefits of combining probation and substance abuse treatment. *J Ment Health Policy Econ* 2006;**9**:57–70.

Alexander CN, Orme-Johnson DW. Walpole Study of the Transcendental Meditation Program in Maximum Security Prisoners II. Longitudinal study of development and psychopathology. *J Offender Rehabil* 2003;**36**:127–60.

Alexander RT, Crouch K, Halstead S, Piachaud J. Long-term outcome from a medium secure service for people with intellectual disability. *J Intellect Disabil Res* 2006;**50**:305–15.

Andersen HS, Sestoft D, Lillebaek T, Gabrielsen G, Hemmingsen R, Kramp P. A longitudinal study of prisoners on remand: psychiatric prevalence, incidence and psychopathology in solitary vs. non-solitary confinement. *Acta Psychiatr Scand* 2000;**102**:19–25.

Armstrong TA. The effect of environment on the behavior of youthful offenders: A randomized experiment. *J Crim Justice* 2002;**30**:19–28.

Arnold EM, Kirk RS, Roberts AC, Griffith DP, Meadows K, Julian J. Treatment of incarcerated, sexually abused adolescent females: an outcome study. *J Child Sex Abus* 2003;**12**:123–39.

Bank L, Marlowe JH, Reid JB, Patterson GR, Weinrott MR. A comparative evaluation of parent-training interventions for families of chronic delinquents. *J Abnorm Child Psychol* 1991;**19**:15–33.

Banks D, Gottfredson DC. Participation in drug treatment court and time to rearrest. *Justice Q* 2004;**21**:637–58.

Barber JG. An application of microcomputer technology to the drug education of prisoners. *J Alcohol Drug Educ* 1993;**38**:14–22.

Barron N, McFarland BH, McCamant L. Varieties of centralized intake: the Portland Target Cities Project experience. *J Psychoactive Drugs* 2002;**34**:75–86.

Barron P, Hassiotis A, Banes J. Offenders with intellectual disability: a prospective comparative study. *J Intellect Disabil Res* 2004;**48**:69–76.

Bates A, Falshaw L, Corbett C, Patel V, Friendship C. A follow-up study of sex offenders treated by Thames Valley Sex Offender Groupwork Programme, 1995–1999. *J Sex Aggress* 2004;**10**:29–38.

Berman AH. Auricular acupuncture as an auxiliary treatment for substance abusers a controlled study of the NADA-Acudetox protocol in two Swedish prisons. *Dtsch Z Akupunktur* 2001;**44**:51.

Berman AH. The reasoning and rehabilitation program: Assessing Short- and long-term outcomes among male Swedish prisoners. *J Offender Rehabil* 2004;**40**:85–103.

Berman AH, Lundberg U, Krook AL, Gyllenhammar C. Treating drug using prison inmates with auricular acupuncture: A randomized controlled trial. *J Subst Abuse Treat* 2004;**26**:95–102.

Bertman-Pate LJ, Burnett DM, Thompson JW, Calhoun CJJ, Deland S, Fryou RM. The New Orleans Forensic Aftercare Clinic: a seven year review of hospital discharged and jail diverted clients. *Behav Sci Law* 2004;**22**:159–69.

Bingham JE, Turner BW, Piotrowski C. Treatment of sexual offenders in an outpatient community-based program. *Psychol Rep* 1995;**76**:1195–200.

Blankenship J, Dansereau DF, Simpson DD. Cognitive enhancements of readiness for corrections-based treatment for drug abuse. *Prison J* 1999;**79**:431–45.

Blechman EA, Maurice A, Buecker B, Helberg C. Can mentoring or skill training reduce recidivism? Observational study with propensity analysis. *Prev Sci* 2000;**1**:139–55.

Borduin CM, Henggeler SW, Blaske DM, Stein RJ. Multisystemic treatment of adolescent sexual offenders. *Int J Offender Ther Comp Criminol* 1990;**34**:105–13.

Borduin CM, Mann BJ, Cone LT, Henggeler SW, Fucci BR, Blaske DM, Williams RA. Multisystemic treatment of serious juvenile offenders: long-term prevention of criminality and violence. *J Consult Clin Psychol* 1995;**63**:569–78.

Bottcher J, Ezell ME. Examining the effectiveness of boot camps: A randomized experiment with a long-term follow up. *J Res Crime Delinq* 2005;**42**:309–32.

Bradford JM, Pawlak A. Double-blind placebo crossover study of cyproterone acetate in the treatment of the paraphilias. *Arch Sex Behav* 1993;**22**:383–402.

Brame R, MacKenzie DL, Waggoner AR, Robinson KD. Moral reconation therapy and problem behavior in the Oklahoma Department of Corrections. *Journal of the Oklahoma Crim Justice Research Consortium* 1996;**3**.

Brannen SJ, Rubin A. Comparing the effectiveness of gender-specific and couples groups in a court-mandated spouse abuse treatment program. *Res Soc Work Pract* 1996;**6**:405–24.

Brannon JM, Troyer R. Adolescent sex offenders: Investigating adult commitment-rates four years later. *Int J Offender Ther Comp Criminol* 1995;**39**:317–26.

Breteler MH, Van den Hurk AA, Schippers GM, Meerkerk GJ. Enrollment in a drug-free detention program: the prediction of successful behavior change of drug-using inmates. *Addict Behav* 1996;**21**:665–9.

Brewster AL, Milner JS, Mollerstrom WW, Saha BT, Harris N. Evaluation of spouse abuse treatment: description and evaluation of the Air Force Family Advocacy Program for spouse physical abuse. *Mil Med* 2002;**167**:464–9.

Brewster MP. An evaluation of the Chester County (PA) Drug Court Program. *J Drug Issues* 2001;**31**:177–206.

Brier N. Targeted treatment for adjudicated youth with learning disabilities: Effects on recidivism. *J Learn Disabil* 1994;**27**:215–22.

Brochu S, Bergeron J, Landry M, Germain M, Schneeberger P. The impact of treatment on criminalized substance addicts. *J Addict Dis* 2002;**21**:23–41.

Broner N, Lattimore PK, Cowell AJ, Schlenger WE. Effects of diversion on adults with co-occurring mental illness and substance use: outcomes from a national multi-site study. *Behav Sci Law* 2004;**22**:519–41.

Broome KM, Knight K, Hiller ML, Simpson DD. Drug treatment process indicators for probationers and prediction of recidivism. *J Subst Abuse Treat* 1996;**13**: 487–91.

Brown BS, O'Grady K, Battjes RJ, Farrell EV. Factors associated with treatment outcomes in an aftercare population. *Am J Addict* 2004;**13**:447–60.

Brown BS, O'Grady KE, Battjes RJ, Farrell EE, Smith NP, Nurco DN. Effectiveness of a stand-alone aftercare program for drug-involved offenders. *J Subst Abuse Treat* 2001;**21**:185–92.

Brown CM, Traverso G, Fedoroff JP. Masturbation prohibition in sex offenders: a crossover study. *Arch Sex Behav* 1996;**25**:397–408.

Brown TL, Henggeler SW, Schoenwald SK, Brondino MJ, Pickrel SG. Multisystemic treatment of substance abusing and dependent juvenile delinquents: effects on school attendance at posttreatment and 6-month follow-up. *Child Serv Soc Pol Res Pract* 1999;**2**:81–93.

Brownlee ID. Intensive probation with young adult offenders: A short reconviction study. *Br J Criminol* 1995;**35**:599–612.

Buchanan A. Criminal conviction after discharge from special (high security) hospital. Incidence in the first 10 years. *Br J Psychiatry* 1998;**172**:472–6.

Buttell FP. Levels of moral reasoning among female domestic violence offenders: evaluating the impact of treatment. *Res Soc Work Pract* 2002;**12**:349–63.

Caldwell MF, Vitacco M, Van-Rybroek GJ. Are violent delinquents worth treating? A cost-benefit analysis. *J Res Crime Delinq* 2006;**43**:148–68.

Carney MM, Buttell FP. A multidimensional evaluation of a treatment program for female batterers: a pilot study. *Res Soc Work Pract* 2004;**14**:249–58.

Carroll KM, Easton CJ, Nich C, Hunkele KA, Neavins TM, Sinha R, *et al*. The use of contingency management and motivational/skills-building therapy to treat young adults with marijuana dependence. *J Consult Clin Psychol* 2006;**74**:955–66.

Chamberlain P. Comparative evaluation of specialized foster care for seriously delinquent youths: A first step. *Community Alternatives: International Journal of Family Care* 1990;**2**:21–36.

Chamberlain P, Reid JB. Comparison of two community alternatives to incarceration for chronic juvenile offenders. *J Consult Clin Psychol* 1998;**66**:624–33.

Chandler DW, Spicer G. Integrated treatment for jail recidivists with co-occurring psychiatric and substance use disorders. *Community Ment Health J* 2006;**42**:405–25.

Christy A, Poythress NG, Boothroyd RA, Petrila J, Mehra S. Evaluating the efficiency and community safety goals of the Broward County Mental Health Court. *Behav Sci Law* 2005;**23**:227–43.

Chung MC, Cumella S, Wensley J, Easthope Y. A follow-up study of mentally disordered offenders after a court diversion scheme: six-month and one-year comparison. *Med Sci Law* 1999;**39**:31–7.

Chung MLF. Can reality therapy help juvenile delinquents in Hong Kong? *J Real Ther* 1994;**14**: 68–80.

Clelland SR, Studer LH, Reddon JR. Follow-up of rapists treated in a forensic psychiatric hospital. *Violence Vict* 1998;**13**:79–86.

Collier CR, Czuchry M, Dansereau DF, Pitre U. The use of node-link mapping in the chemical dependency treatment of adolescents. *J Drug Educ* 2001;**31**:305–17.

Condelli WS, Bradigan B, Holanchock H. Intermediate care programs to reduce risk and better manage inmates with psychiatric disorders. *Behav Sci Law* 1997;**15**: 459–67.

Conniff KM, Scarlett JM, Goodman S, Appel LD. Effects of a pet visitation program on the behavior and emotional state of adjudicated female adolescents. *Anthrozoos* 2005;**18**:379–95.

Cook DA, Fox CA, Weaver CM, Rooth FG. The Berkeley Group: ten years' experience of a group for non-violent sex offenders. *Br J Psychiatry* 1991;**158**:238–43.

Cooke A, Ford R, Thompson T, Wharne S, Haines P. "Something to lose": Case management for mentally disordered offenders. *J Ment Health* 1994;**3**:59–67.

Cosden M, Ellens J, Schnell J, Yamini-Diouf Y. Efficacy of a mental health treatment court with assertive community treatment. *Behav Sci Law* 2005;**23**:199–214.

Cosden M, Ellens JK, Schnell JL, Yamini-Diouf Y, Wolfe MM. Evaluation of a mental health treatment court with assertive community treatment. *Behav Sci Law* 2003;**21**:415–27.

Craddock A. Estimating criminal justice system costs and cost-savings benefits of day reporting centers. *J Offender Rehabil* 2004;**39**:69–98.

Craissati J, McClurg G. The Challenge Project: a treatment program evaluation for perpetrators of child sexual abuse. *Child Abuse Negl* 1997;**21**:637–48.

Cunningham A. *Lessons learned from a randomized study of multisystemic therapy in Canada*. London, Ontario: Centre for Children and Families in the Justice System; 2002.

Cunningham PB, Henggeler SW, Brondino MJ, Pickrel SG. Testing underlying assumptions of the family empowerment perspective. *J Child Fam Stud* 1999;**8**: 437–49.

Czuchry M, Dansereau DF. Node-link mapping and psychological problems. Perceptions of a residential drug abuse treatment program for probationers. *J Subst Abuse Treat* 1999;**17**:321–9.

Czuchry M, Dansereau DF. The importance of need for cognition and educational experience in enhanced and standard substance abuse treatment. *J Psychoactive Drugs* 2004;**36**:243–51.

Czuchry M, Dansereau DF. Using motivational activities to facilitate treatment involvement and reduce risk. *J Psychoactive Drugs* 2005;**37**:7–13.

Czuchry M, Dansereau DF, Sia TL, Simpson DD. Using peer, self, and counselor ratings to evaluate treatment progress. *J Psychoactive Drugs* 1998;**30**:81–7.

Davis TM, Baer JS, Saxon AJ, Kivlahan DR. Brief motivational feedback improves post-incarceration treatment contact among veterans with substance use disorders. *Drug Alcohol Depend* 2003;**69**:197–203.

Davison S, Jamieson E, Taylor PJ. Route of discharge for special (high-security) hospital patients with personality disorder. Relationship with re-conviction. *Br J Psychiatry* 1999;**175**:224–7.

De Leon G, Melnick G, Thomas G, Kressel D, Wexler HK. Motivation for treatment in a prison-based therapeutic community. *Am J Drug Alcohol Abuse* 2000;**26**:33–46.

Dembo R, Ramirez-Garnica G, Rollie M, Schmeidler J, Livingston S, Hartsfield A. Youth recidivism twelve months after a Family Empowerment Intervention: Final report. *J Offender Rehabil* 2000;**31**:29–65.

Dembo R, Ramirez-Garnica G, Schmeidler J, Rollie M, Livingstone S, Hartfield A. Long-term impact of a Family Empowerment Intervention on juvenile offender recidivism. *J Offender Rehabil* 2001;**33**:33–57.

Dembo R, Shemwell M, Pacheco K, Seeberger W, Rollie M, Schmeidler J, Wothke W. A longitudinal study of the impact of a family empowerment intervention on juvenile offender psychosocial functioning: an expanded assessment. *J Child Adolesc Subst Abuse* 2000;**10**:1–7.

Dembo R, Wothke W, Livingston S, Schmeidler J. The impact of a family empowerment intervention on juvenile offender heavy drinking: a latent growth model analysis. *Subst Use Misuse* 2002;**37**:1359–90.

Deschenes EP, Turner S, Petersilia J. A dual experiment in intensive community supervision: Minnesota's Prison Diversion and Enhanced Supervised Release Programs. *Prison J* 1995;**75**:330–56.

Dhaliwal GK, Porporino F, Ross RR. Assessment of criminogenic factors, program assignment, and recidivism. *Crim Justice Behav* 1994;**21**:454–67.

Doblin R. Dr Leary's Concord Prison Experiment: a 34-year follow-up study. *J Psychoactive Drugs* 1998;**30**:419–26.

Dugan JR, Everett RS. Experimental test of chemical dependency therapy for jail inmates. *Int J Offender Ther Comp Criminol* 1998;**42**:360–8.

Dutton DG, Bodnarchuk M, Kropp R, Hart SD, Ogloff JRP: Wife assault treatment and criminal recidivism:

An 11-year follow-up. *Int J Offender Ther Comp Criminol* 1997;**41**:9–23.

Dwyer SM. Reduction of sex offender paraphilic fantasies: 6 month and 1 year follow-up. *J Psychol Human Sex* 1990;**3**:57–65.

Dwyer SM. Treatment outcome study: Seventeen years after sexual offender treatment. *Sex Abuse* 1997;**9**:149–60.

Dwyer SM, Myers S. Sex offender treatment: A six-month to ten-year follow-up study. *Ann Sex Res* 1990;**3**:305–18.

Dwyer SM, Rosser BRS. Treatment outcome research cross-referencing a six-month to ten-year follow-up study on sex offenders. *Ann Sex Res* 1992;**5**:87–97.

Easton C, Swan S, Sinha R. Motivation to change substance use among offenders of domestic violence. *J Subst Abuse Treat* 2000;**19**:1–5.

Echeburua E, Fernandez-Montalvo J, Amor PJ. Psychological treatment of men convicted of gender violence: A pilot study in Spanish prisons. *Int J Offender Ther Comp Criminol* 2006;**50**:57–70.

Eddy JM, Chamberlain P. Family management and deviant peer association as mediators of the impact of treatment condition on youth antisocial behavior. *J Consult Clin Psychol* 2000;**68**:857–63.

Eddy J, Whaley RB, Chamberlain P. The prevention of violent behavior by chronic and serious male juvenile offenders: a 2-year follow-up of a randomized clinical trial. *J Emot Behav Disord* 2004;**12**:2–8.

Edleson JL, Syers M. The effects of group treatment for men who batter: An 18-month follow-up study. *Res Soc Work Pract* 1991;**1**:227–43.

Eisenbuch A. The Carlson Psychological Survey as a measure of prosocial changes in lifestyle, violent juvenile offenders within a secure treatment program. *Am J Forens Psychiatry* 1997;**18**:27–33.

Elrod HP, Minor KI. Second wave evaluation of a multi-faceted intervention for juvenile court probationers. *Int J Offender Ther Comp Criminol* 1992;**36**:247–62.

Evershed S, Tennant A, Boomer D, Rees A, Barkham M, Watsons A. Practice-based outcomes of dialectical behavioral therapy (DBT) targeting anger and violence, with male forensic patients: a pragmatic and non-contemporaneous comparison. *Crim Behav Ment Health* 2003;**13**:198–213.

Fagan JA. Treatment and reintegration of violent juvenile offenders: Experimental results. *Justice Q* 1990;**7**:233–63.

Falla S, Sugarman P, Roberts L. Reconviction after discharge from a regional secure unit. *Med Sci Law* 2000;**40**:156–7.

Fals-Stewart W, Lucente S. The effect of cognitive rehabilitation on the neuropsychological status of patients in drug abuse treatment who display neurocognitive impairment. *Rehabil Psychol* 1994;**39**: 75–94.

Faulkner K, Stoltenberg CD, Cogen R, Nolder M, Shooter E. Cognitive-behavioral group treatment for male spouse abusers. *J Fam Violence* 1992;**7**:37–55.

Feder L. A profile of mentally ill offenders and their adjustment in the community. *J Psychiatry Law* 1991;**19**:79–98.

Feder L, Dugan L. Testing a court-mandated treatment program for domestic violence offenders: the broward experiment. In: Fisher BS, editor. *Violence against women and family violence: developments in research, practice, and policy.* Rockville, MD: National Institute of Justice; 2004: pp. 1–15.

Feder L, Forde DR. *Test of the efficacy of court-mandated counseling for domestic violence offenders: The Broward Experiment, Executive Summary.* 2000. Submitted to US Department of Justice. URL: www.ncjrs.gov/pdffiles1/nij/grants/184631.pdf (accessed February 2010).

Fielding JE, Tye G, Ogawa PL, Imam IJ, Long AM. Los Angeles County drug court programs: initial results. *J Subst Abuse Treat* 2002;**23**:217–24.

Freeman K. Health and well-being outcomes for drug-dependent offenders on the NSW Drug Court programme. *Drug Alcohol Rev* 2003;**22**:409–16.

Friedman AS, Terras A, Glassman K. Multimodel substance use intervention program for male delinquents. *J Child Adolesc Subst Abuse* 2002;**11**:43–65.

Friendship C, Blud L, Erikson M, Travers R, Thornton D. Cognitive-behavioural treatment for imprisoned offenders: An evaluation of HM Prison Service's cognitive skills programmes. *Legal Criminological Psychol* 2003;**8**:103–14.

Friendship C, Mann RE, Beech AR. Evaluation of a national prison-based treatment program for sexual offenders in England and Wales. *J Interpers Violence* 2003;**18**:744–59.

Friendship C, McClintock T, Rutter S, Maden A. Re-offending: Patients discharged from a Regional Secure Unit. *Crim Behav Ment Health* 1999;**9**:226–36.

Galloway AL, Drapela LA. Are effective drug courts an urban phenomenon? Considering their impact on recidivism among a nonmetropolitan adult sample in Washington State. *Int J Offender Ther Comp Criminol* 2006;**50**:280–93.

Gondolf EW. Regional and cultural utility of conventional batterer counseling. *Violence Against Women* 2004;**10**: 880–900.

Gondolf EW, Jones AS. The program effect of batterer programs in three cities. *Violence Vict* 2001;**16**:693–704.

Gordon DA, Graves K, Arbuthnot J. The effect of functional family therapy for delinquents on adult criminal behavior. *Crim Justice Behav* 1995;**22**:60–73.

Gossage JP, Barton L, Foster L, Etsitty L, LoneTree C, Leonard C, May PA. Sweat lodge ceremonies for jail-based treatment. *J Psychoactive Drugs* 2003;**35**:33–42.

Gottfredson DC, Exum ML. The Baltimore City Drug Treatment Court: One-year results from a randomized study. *J Res Crime Delinq* 2002;**39**:337–56.

Gottfredson DC, Najaka SS, Kearley B. Effectiveness of drug treatment courts: Evidence from a randomized trial. *Criminol Public Policy* 2003;**2**:171–96.

Granfield R, Eby C, Brewster T. An examination of the Denver Drug Court: The impact of a treatment-oriented drug-offender system. *Law Policy* 1998;**20**:183–202.

Green G, Smith R, South N. Court-based psychiatric assessment: Case for an integrated diversionary and public health role. *J Forens Psychiatry Psychol* 2005;**16**: 577–91.

Greenberg WM, Shah PJ, Seide M. Recidivism on an acute psychiatric forensic service. *Hosp Community Psychiatry* 1993;**44**:583–5.

Greenwood PW, Deschenes EP, Adams J. *Chronic juvenile offenders: Final results from the Skillman Aftercare Experiment*. Santa Monica, CA: RAND; 1993.

Greenwood PW, Turner S. Evaluation of the paint creek youth center: A residential program for serious delinquents. *Criminology* 1993;**31**:263–79.

Greeven PG, De Ruiter C. Personality disorders in a Dutch forensic psychiatric sample: changes with treatment. *Crim Behav Ment Health* 2004;**14**:280–90.

Grubin D, Madsen L, Parsons S, Sosnowski D, Warberg B. A prospective study of the impact of polygraphy on high-risk behaviors in adult sex offenders. *Sex Abuse* 2004;**16**:209–22.

Guarino-Ghezzi S, Kimball LM. Juvenile sex offenders in treatment. *Corrections Manage Q* 1998;**2**:45–54.

Guerra NG, Slaby RG. Cognitive mediators of aggression in adolescent offenders. 2: Intervention. *Dev Psychol* 1990;**26**:269–77.

Gussak D. Effects of art therapy with prison inmates: A follow-up study. *Arts Psychother* 2006;**33**:188–98.

Hagan MP, Gust-Brey KL. A ten-year longitudinal study of adolescent perpetrators of sexual assault against children. *J Offender Rehabil* 2000;**31**:117–26.

Hagan MP, Gust-Brey KL. A ten-year longitudinal study of adolescent rapists upon return to the community. *Int J Offender Ther Comp Criminol* 1999;**43**:448–58.

Hagan M, King RP. Recidivism rates of youth completing an intensive treatment program in a juvenile correctional facility. *Int J Offender Ther Comp Criminol* 1992;**36**:349–58.

Hagan MP, Cho ME, Jensen JA, King RP. An assessment of the effectiveness of an intensive treatment program for severely mentally disturbed juvenile offenders. *Int J Offender Ther Comp Criminol* 1997;**41**:340–50.

Hagan MP, King RP, Patros RL. Recidivism among adolescent perpetrators of sexual assault against children. *J Offender Rehabil* 1994;**21**:127–37.

Hagan MP, King RP, Patros RL. The efficacy of a serious sex offenders treatment program for adolescent rapists. *Int J Offender Ther Comp Criminol* 1994;**38**:141–50.

Hall GCN. The preliminary development of theory-based community treatment for sexual offenders. *Prof Psychol Res Pr* 1995;**26**:478–83.

Harrell A, Cavanagh S, Roman J. *Findings from the Evaluation of the D.C. Superior Court Drug Intervention Program.* 1999. Submitted to the US Department of Corrections. URL: www.ncjrs.gov/pdffiles1/nij/178941.pdf (accessed February 2010).

Harrell A, Cavanagh S, Roman J. *Evaluation of the D.C. Superior Court Drug Intervention Programs*. Washington, DC: US Department of Justice; 2000.

Harrington RC, Kroll L, Rothwell J, McCarthy K, Bradley D, Bailey S. Psychosocial needs of boys in secure care for serious or persistent offending. *J Child Psychol Psychiatry* 2005;**46**:859–66.

Harris GT, Rice ME, Cormier CA. Psychopathy and violent recidivism. *Law Hum Behav* 1991;**15**:625–37.

Hawkins JD, Jenson JM, Catalano RF, Wells EA. Effects of a skills training intervention with juvenile delinquents. *Res Soc Work Pract* 1991;**1**:107–21.

Hendricks B, Werner T, Shipway L, Turinetti GJ. Recidivism among spousal abusers: predictions and program evaluation. *J Interpers Violence* 2006;**21**:703–16.

Henggeler SW, Borduin CM, Melton GB, Mann BJ, Smith LA, Hall JA, *et al*. Effects of multisystemic therapy on drug use and abuse in serious juvenile offenders: A progress report from two outcome studies. *Fam Dyn Addict Q* 1991;**1**:40–51.

Henggeler SW, Clingempeel WG, Brondino MJ, Pickrel SG. Four-year follow-up of multisystemic therapy with substance-abusing and substance-dependent juvenile offenders. *J Am Acad Child Adolesc Psychiatry* 2002;**41**: 868–74.

Henggeler SW, Halliday-Boykins CA, Cunningham PB, Randall J, Shapiro SB, Chapman JE. Juvenile drug court: enhancing outcomes by integrating evidence-based treatments. *J Consult Clin Psychol* 2006;**74**:42–54.

Henggeler SW, Melton GB, Brondino MJ, Scherer DG, Hanley JH. Multisystemic therapy with violent and chronic juvenile offenders and their families: the role of treatment fidelity in successful dissemination. *J Consult Clin Psychol* 1997;**65**:821–33.

Henggeler SW, Melton GB, Smith LA, Schoenwald SK, Hanley JH. Family preservation using multisystemic treatment: Long-term follow-up to a clinical trial with serious juvenile offenders. *J Child Fam Stud* 1993;**2**: 283–93.

Henggeler SW, Melton GB, Smith LA. Family preservation using multisystemic therapy: an effective alternative to incarcerating serious juvenile offenders. *J Consult Clin Psychol* 1992;**60**:953–61.

Henggeler SW, Pickrel SG, Brondino MJ, Crouch JL. Eliminating (almost) treatment dropout of substance abusing or dependent delinquents through home-based multisystemic therapy. *Am J Psychiatry* 1996;**153**:427–8.

Henggeler SW, Pickrel SG, Brondino MJ. Multisystemic treatment of substance-abusing and dependent delinquents: outcomes, treatment fidelity, and transportability. *Ment Health Serv Res* 1999;**1**:171–84.

Henning KR, Frueh BC. Cognitive-behavioral treatment of incarcerated offenders: An evaluation of the Vermont Department of Corrections' Cognitive Self-Change Program. *Crim Justice Behav* 1996;**23**:523–41.

Herinckx HA, Swart SC, Ama SM, Dolezal CD, King S. Rearrest and linkage to mental health services among clients of the Clark County mental health court program. *Psychiatr Serv* 2005;**56**:853–7.

Hiller ML, Knight K, Broome KM, Simpson DD. Compulsory community-based substance abuse treatment and the mentally ill criminal offender. *Prison J* 1996;**76**:180–91.

Hoff RA, Rosenheck RA, Baranosky MV, Buchanan J, Zonana H. Diversion from jail of detainees with substance abuse: the interaction with dual diagnosis. *Am J Addict* 1999;**8**:201–10.

Huey SJJ, Henggeler SW, Brondino MJ, Pickrel SG. Mechanisms of change in multisystemic therapy: reducing delinquent behavior through therapist adherence and improved family and peer functioning. *J Consult Clin Psychol* 2000;**68**:451–67.

Hughes GV. Short and long term outcomes for a cognitive behavioral anger mangement program. In: Davies G, Lloyd-Bostock S, McMurran M, Wilson C, editors. *Psychology, law, and criminal justice: International developments in research and practice.* New York, NY: Walter de Gruyter; 1996: pp. 485–94.

Hughey R, Klemke LW. Evaluation of a jail-based substance abuse treatment program. *Fed Probat* 1996;**60**:40–4.

Idemudia SE. Behaviour therapeutic interventions among prison inmates in Nigeria. In: Edited by Madu SN, Baguma PK, Pritz AE, editors. *Psychotherapy and African Reality.* Sovenga: UNIN Press; 2000: pp. 49–61.

Inciardi JA, Martin SS, Butzin CA, Hooper RM, Harrison LD. An effective model of prison-based treatment for drug-involved offenders. *J Drug Issues* 1997;**27**:261–78.

Inciardi JA, Martin SS, Scarpitti FR. Appropriateness of assertive case management for drug-involved prison releasees. *J Case Manag* 1994;**3**:145–9.

Jainchill N, Hawke J, Messina M. Post-treatment outcomes among adjudicated adolescent males and females in modified therapeutic community treatment. *Subst Use Misuse* 2005;**40**:975–96.

Jamieson E, Davison S, Taylor PJ. Reconviction of special (high security) hospital patients with personality disorder: Its relationship with route of discharge and time at risk. *Crim Behav Ment Health* 2000;**10**:88–99.

Jamieson L, Taylor PJ. Mental disorder and perceived threat to the public: people who do not return to community living. *Br J Psychiatry* 2002;**181**:399–405.

Jenson JM, Potter CC. The effects of cross-system collaboration on mental health and substance abuse problems of detained youth. *Res Soc Work Pract* 2003;**13**:588–607.

Jones AS, D'Agostino RB, Gondolf EW, Heckert A. Assessing the effect of batterer program completion on reassault using propensity scores. *J Interpers Violence* 2004;**19**:1002–20.

Kahn TJ, Chambers HJ. Assessing reoffense risk with juvenile sexual offenders. *Child Welfare* 1991;**70**:333–45.

Kapp SA, Schwartz I, Epstein I. Adult imprisonment of males released from residential childcare: A longitudinal study. *Residential Treatment Children Youth* 1994;**12**:19–36.

Kelley TM, Kennedy DB, Homant RJ. Evaluation of an individualized treatment program for adolescent shoplifters. *Adolescence* 2003;**38**:725–33.

Kelly JF, Finney JW, Moos R. Substance use disorder patients who are mandated to treatment: characteristics, treatment process, and 1- and 5-year outcomes. *J Subst Abuse Treat* 2005;**28**:213–23.

Kinlock TW, Battjes RJ, Schwartz RP, MTC Project Team. A novel opioid maintenance program for prisoners: report of post-release outcomes. *Am J Drug Alcohol Abuse* 2005;**31**:433–54.

Knight K, Hiller ML. Community-based substance abuse treatment: A 1-year outcome evaluation of the Dallas county judicial treatment center. *Fed Probat* 1997;**61**:61–8.

Knight K, Hiller ML, Simpson DD, Broome KM. The validity of self-reported cocaine use in a criminal justice treatment sample. *Am J Drug Alcohol Abuse* 1998;**24**: 647–60.

Knight K, Simpson DD, Chatham LR, Camacho LM. An assessment of prison-based drug treatment: Texas' In-Prison Therapeutic Community Program. *J Offender Rehabil* 1997;**24**:75–100.

Knight K, Simpson DD, Dansereau DF. Knowledge mapping: A psychoeducational tool in drug abuse relapse prevention training. *J Offender Rehabil* 1994;**20**:187–205.

Kongsakon R, Papadopoulos KI, Saguansiritham R. Mirtazapine in amphetamine detoxification: a placebo-controlled pilot study. *Int Clin Psychopharmacol* 2005;**20**:253–6.

Kunz M, Yates KF, Czobor P, Rabinowitz S, Lindenmayer JP, Volavka J. Course of patients with histories of aggression and crime after discharge from a cognitive-behavioral program. *Psychiatr Serv* 2004;**55**:654–9.

Kutin JJ, Koutroulis GY. Strike a light; this match didn't work! Evaluation of the victorian community based corrections treatment and testing policy: Does matching to treatment improve outcomes? *Psychiatry Psychol Law* 2003;**10**:379–89.

Lamb HR, Weinberger LE, Reston-Parham C. Court intervention to address the mental health needs of mentally ill offenders. *Psychiatr Serv* 1996;**47**:275–81.

Lane J, Turner S, Fain T, Sehgal A. Evaluating an Experimental Intensive Juvenile Probation Program: Supervision and Official Outcomes. *Crime Delinq* 2005;**51**:26–52.

Langton CM, Barbaree HE, Harkins L, Peacock EJ. Sex offenders' response to treatment and its association with recidivism as a function of psychopathy. *Sex Abuse* 2006;**18**:99–120.

Larsen J, Hudson SM, Ward T. Evaluation of attributional change in a relapse prevention program for child molesters. *Behav Change* 1995;**12**:127–38.

Larson JD. Cognitive-behavioral group therapy with delinquent adolescents: A cooperative approach with the juvenile court. *J Offender Rehabil* 1990;**16**:47–64.

Lee B, Gilligan J. The Resolve to Stop the Violence Project: transforming an in-house culture of violence through a jail-based programme. *J Public Health* 2005;**27**:149–55.

Lee JKP, Proeve MJ, Lancaster M, Jackson HJ, Pattison P, Mullen PE. An evaluation and 1-year follow-up study of a community-based treatment program for sex offenders. *Aust Psychol* 1996;**31**:147–52.

Leeman LW, Gibbs JC, Fuller D. Evaluation of a multi-component group treatment program for juvenile delinquents. *Aggress Behav* 1993;**19**:281–92.

Leukefeld CG, Hiller ML, Webster JM, Tindall MS, Martin SS, Duvall J, Tolbert VE, Garrity TF. A prospective examination of high-cost health services utilization among drug using prisoners reentering the community. *J Behav Health Serv Res* 2006;**33**:73–85.

Leve LD, Chamberlain P. Association with delinquent peers: intervention effects for youth in the juvenile justice system. *J Abnorm Child Psychol* 2005;**33**:339–47.

Leve LD, Chamberlain P, Reid JB. Intervention outcomes for girls referred from juvenile justice: effects on delinquency. *J Consult Clin Psychol* 2005;**73**:1181–5.

Liau AK, Shively R, Horn M, Landau J, Barriga A, Gibbs JC. Effects of psychoeducation for offenders in a community correctional facility. *J Community Psychol* 2004;**32**:543–58.

Lind B, Weatherburn D, Chen S, Shanahan M, Lancsar E, Haas M, De Abreu Lourenco R. *New South Wales Drug Court evaluation: Cost-effectiveness.* Sydney: New South Wales Bureau of Crime Statistics and Research; 2002.

Lindforss L, Magnusson D. Solution-focused therapy in prison. *Contemp Fam Ther* 1997;**19**:89–103.

Lindsay WR, Allan R, MacLeod F, Smart N, Smith AHW. Long-term treatment and management of violent tendencies of men with intellectual disabilities convicted of assault. *Ment Retard* 2003;**41**:47–56.

Lindsay WR, Smith AH. Responses to treatment for sex offenders with intellectual disability: a comparison of men with 1- and 2-year probation sentences. *J Intellect Disabil Res* 1998;**42**:346–53.

Little GL, Robinson KD, Burnette KD. Treating drug offenders with Moral Reconation Therapy: a three-year recidivism report. *Psychol Rep* 1991;**69**:1151–4.

Little GL, Robinson KD, Burnette KD. Cognitive behavioral treatment of felony drug offenders: A five-year recidivism report. *Psychol Rep* 1993;**73**:1089–90.

Little M, Kogan J, Bullock R, Van Der Laan P. ISSP: An experiment in multi-systemic responses to persistent

young offenders known to children's services. *Br J Criminol* 2004;**44**:225–40.

Looman J, Abracen J, Nicholaichuk TP. Recidivism among treated sexual offenders and matched controls: Data from the Regional Treatment Centre (Ontario). *J Interpers Violence* 2000;**15**:279–90.

Lorandos DA. Change in adolescent boys at teen ranch: a five-year study. *Adolescence* 1990;**25**:509–16.

Luettgen J, Chrapko WE, Reddon JR. Preventing violent re-offending in not criminally responsible patients. An evaluation of a continuity of treatment program. *Int J Law Psychiatry* 1998;**21**:89–98.

Maden A, Rutter S, McClintock T, Friendship C, Gunn J. Outcome of admission to a medium secure psychiatric unit. I. Short- and long-term outcome. *Br J Psychiatry* 1999;**175**:313–16.

Mann BJ, Borduin CM, Henggeler SW, Blaske DM. An investigation of systemic conceptualizations of parent-child coalitions and symptom change. *J Consult Clin Psychol* 1990;**58**:336–44.

Mann RE, Webster SD, Schofield C, Marshall WL. Approach versus avoidance goals in relapse prevention with sexual offenders. *Sex Abuse* 2004;**16**:65–75.

Marlowe DB, Festinger DS, Dugosh KL, Lee PA. Are judicial status hearings a 'key component' of drug court? Six and twelve months outcomes. *Drug Alcohol Depend* 2005;**79**:145–55.

Marques JK, Day DM, Nelson C, West MA. Findings and recommendations from California's experimental treatment program. In: Hall GCN, Hirschman R, Graham JR, Zaragoza MS, editors. *Sexual aggression, issues in etiology, assessment, and treatment*. Washington, DC: Taylor & Francis; 1993: pp. 197–214.

Marques JK, Day DM, Nelson C, West MA. Effects of cognitive-behavioral treatment on sex offender recidivism: Preliminary results of a longitudinal study. *Crim Justice Behav* 1994;**21**:28–54.

Marques JK, Wiederanders M, Day DM, Nelson C, Van Ommeren A. Effects of a relapse prevention program on sexual recidivism: final results from California's sex offender treatment and evaluation project (SOTEP). *Sex Abuse* 2005;**17**:79–107.

Martin SS, Inciardi JA. Case management outcomes for drug-involved offenders. *Prison J* 1997;**77**:168–83.

Martin SS, Scarpitti FR. An intensive case management approach for paroled iv drug users. *J Drug Issues* 1993;**23**:43–59.

Martin SS Sr, Inciardi JA, O'Connell DJ. Treatment research in OZ. Is randomization the ideal or just somewhere over the rainbow? *Fed Probat* 2003;**67**:53–60.

McCollister KE, French MT, Prendergast ML, Hall E, Sacks S. Long-term cost effectiveness of addiction treatment for criminal offenders. *Justice Q* 2004;**21**: 659–79.

McFarland BH, Blair G. Delivering comprehensive services to homeless mentally ill offenders. *Psychiatr Serv* 1995;**46**:179–81.

McGrath RJ, Cumming G, Livingston JA, Hoke SE. Outcome of a treatment program for adult sex offenders: From prison to community. *J Interpers Violence* 2003;**18**:3–17.

McGrath RJ, Hoke SE, Vojtisek JE. Cognitive-behavioral treatment of sex offenders: A treatment comparison and long-term follow-up study. *Crim Justice Behav* 1998;**25**:203–25.

McMurran M, Egan V, Ahmadi S. A retrospective evaluation of a therapeutic community for mentally disordered offenders. *J Forens Psychiatry* 1998;**9**:103–13.

Meisel JS. Relationships and juvenile offenders: The effects of intensive aftercare supervision. *Prison J* 2001;**81**:206–45.

Melnick G, De Leon G, Thomas G, Kressel D, Wexler HK. Treatment process in prison therapeutic communities: motivation, participation, and outcome. *Am J Drug Alcohol Abuse* 2001;**27**:633–50.

Messina N, Wish E, Nemes S. Therapeutic community treatment may reduce future incarceration: A research note. *Fed Probat* 2001;**65**:40–5.

Miner MH, Marques JK, Day DM, Nelson C. Impact of relapse prevention in treating sex offenders: Preliminary findings. *Ann Sex Res* 1990;**3**:165–85.

Minor KI, Elrod HP. The effects of a multi-faceted intervention on the offense activities of juvenile probationers. *J Offender Couns* 1990;**15**:87–108.

Minor KI, Elrod P. The effects of a probation intervention on juvenile offenders' self-concepts, loci of control, and perceptions of juvenile justice. *Youth Soc* 1994;**25**:490–511.

Mitchell O, Mackenzie DL, Perez DM. A randomized evaluation of the Maryland correctional boot camp for adults: effects on offender antisocial attitudes and cognitions. In: Benda BB, Pallone NJ, editors. *Rehabilitation issues, problems, and prospects in boot camp*. Binghamton, NY: The Haworth Press Inc.; 2005: pp. 71–86.

Morral AR, McCaffrey DF, Ridgeway G. Effectiveness of community-based treatment for substance-abusing adolescents: 12-month outcomes of youths entering phoenix academy or alternative probation dispositions. *Psychol Addict Behav* 2004;**18**:257–68.

Myers WC, Burton PR, Sanders PD, Donat KM, Cheney J, Fitzpatrick TM, Monaco L. Project back-on-track at 1 year: a delinquency treatment program for early-career juvenile offenders. *J Am Acad Child Adolesc Psychiatry* 2000;**39**:1127–34.

Nakaya N, Kumano H, Minoda K, Koguchi T, Tanouchi K, Kanazawa M, Fukudo S. Preliminary study: psychological effects of muscle relaxation on juvenile delinquents. *Int J Behav Med* 2004;**11**:176–80.

Needels K, James-Burdumy S, Burghardt J. Community case management for former jail inmates: its impacts on rearrest, drug use, and HIV risk. *J Urban Health* 2005;**82**:420–33.

Nicholaichuk T, Gordon A, Gu D, Wong S. Outcome of an institutional sexual offender treatment program: a comparison between treated and matched untreated offenders. *Sex Abuse* 2000;**12**:139–53.

Nicholson RA, Norwood S, Enyart C. Characteristics and outcomes of insanity acquittees in Oklahoma. *Behav Sci Law* 1991;**9**:487–500.

Nielsen AL, Scarpitti FR, Inciardi JA. Integrating the therapeutic community and work release for drug-involved offenders: The CREST program. *J Subst Abuse Treat* 1996;**13**:349–58.

O'Farrell TJ, Van Hutton V, Murphy CM. Domestic violence before and after alcoholism treatment: a two-year longitudinal study. *J Stud Alcohol* 1999;**60**:317–21.

Ortmann R. The effectiveness of social therapy in prison-a randomized experiment. *Crime Delinq* 2000;**46**:214–32.

Ovaert LB, Cashel ML, Sewell KW. Structured group therapy for posttraumatic stress disorder in incarcerated male juveniles. *Am J Orthopsychiatry* 2003;**73**:294–301.

Petersilia J, Turner S. Comparing intensive and regular supervision for high-risk probationers: Early results from an experiment in California. *Crime Delinq* 1990;**36**:87–111.

Pitre U, Dansereau DF, Newbern D, Simpson DD. Residential drug abuse treatment for probationers. Use of node-link mapping to enhance participation and progress. *J Subst Abuse Treat* 1998;**15**:535–43.

Polaschek DL, Wilson NJ, Townsend MR, Daly LR. Cognitive-behavioral rehabilitation for high-risk violent offenders: an outcome evaluation of the violence prevention unit. *J Interpers Violence* 2005;**20**:1611–27.

Poynter TL. An evaluation of a group programme for male perpetrators of domestic violence: A follow-up study. *Aust J Marriage Fam* 1991;**12**:64–76.

Prendergast ML, Hall EA, Wexler HK. Multiple measures of outcome in assessing a prison-based drug treatment program. *J Offender Rehabil* 2003;**37**:65–94.

Prendergast ML, Hall EA, Wexler HK, Melnick G, Cao Y. Amity prison-based therapeutic community: 5-year outcomes. *Prison J* 2004;**84**:36–60.

Pugh J, Comiskey CM. Drug treatment programmes in prison: longitudinal outcome evaluation, policy development and planning interventions. *Ir J Psychol Med* 2006;**23**:63–7.

Putkonen H, Komulainen EJ, Virkkunen M, Eronen M, Lonnqvist J. Risk of repeat offending among violent female offenders with psychotic and personality disorders. *Am J Psychiatry* 2003;**160**:947–51.

Reed S, Russell A, Xenitidis K, Murphy DG. People with learning disabilities in a low secure in-patient unit: comparison of offenders and non-offenders. *Br J Psychiatry* 2004;**185**:499–504.

Reiss D, Grubin D, Meux C. Young 'psychopaths' in special hospital: treatment and outcome. *Br J Psychiatry* 1996;**168**:99–104.

Rhodes W, Pelissier B, Gaes G, Saylor W, Camp S, Wallace S. Alternative solutions to the problem of selection bias in an analysis of federal residential drug treatment programs. *Eval Rev* 2001;**25**:331–69.

Rice JS, Remy LL. Impact of horticultural therapy on psychosocial functioning among urban jail inmates. *J Offender Rehabil* 1998;**26**:169–91.

Rice ME, Harris GT, Cormier CA. Evaluation of a maximum security therapeutic community for psychopaths and other mentally disordered offenders. *Law Hum Behav* 1992;**16**:399–412.

Rice ME, Quinsey VL, Harris GT. Sexual recidivism among child molesters released from a maximum security psychiatric institution. *J Consult Clin Psychol* 1991;**59**:381–6.

Richards HJ, Casey JO, Lucente SW. Psychopathy and treatment response in incarcerated female substance abusers. *Crim Justice Behav* 2003;**30**:251–76.

Richards JM, Beal WE, Seagal JD, Pennebaker JW. Effects of disclosure of traumatic events on illness behavior among psychiatric prison inmates. *J Abnorm Psychol* 2000;**109**:156–60.

Ridenour TA, Treloar JH, Dean RS. Utility analysis for clinical decision-making in small treatment settings. *Int J Neurosci* 2003;**113**:417–30.

Robinson, D. *The impact of Cognitive Skills Training on post-release recidivism among Canadian federal offenders.* Ottawa, Ontario: Correctional Service of Canada; 1995.

Robinson D. Factors influencing the effectiveness of cognitive skills training. *Forum Corrections Res* 1996;**8**:6–9.

Rodriguez N, Webb VJ. Multiple measures of juvenile drug court effectiveness: results of a quasi-experimental design. *Crime Delinq* 2004;**50**:292–314.

Rohde P, Clarke GN, Mace DE, Jorgensen JS, Seeley JR. An efficacy/effectiveness study of cognitive-behavioral treatment for adolescents with comorbid major depression and conduct disorder. *J Am Acad Child Adolesc Psychiatry* 2004;**43**:660–8.

Rohde P, Jorgensen JS, Seeley JR, Mace DE. Pilot evaluation of the Coping Course: a cognitive-behavioral intervention to enhance coping skills in incarcerated youth. *J Am Acad Child Adolesc Psychiatry* 2004;**43**:669–76.

Rossman, S, Gouvis, C, Buck, J, Morley, E. *Confronting relapse and recidivism: case management and aftercare services in the OPTS Programs.* 2000. Submitted to the US Department of Justice. URL: www.ncjrs.gov/pdffiles1/nij/grants/181047.pdf (accessed February 2010).

Rounds-Bryant JL, Motivans MA, Pelissier BM. Correlates of drug treatment outcomes for African American and white male federal prisoners: results from the TRIAD study. *Am J Drug Alcohol Abuse* 2004;**30**:495–514.

Russell KC. Evaluating the effects of the Wendigo Lake Expedition Program on young offenders. *Youth Violence Juvenile Justice* 2006;**4**:185–203.

Russo G. Follow-up of 91 mentally ill criminals discharged from the maximum security hospital in Barcelona P.G. *Int J Law Psychiatry* 1994;**17**:279–301.

Ryan JP, Davis RK, Yang H. Reintegration services and the likelihood of adult imprisonment: a longitudinal study of adjudicated delinquents. *Res Soc Work Pract* 2001;**11**:321–37.

Ryan T, Hatfield B, Pickering L, Downing B, Crofts R. A follow up-study of probation service-approved premises residents in contact with mental health services. *J Forens Psychiatry Psychol* 2005;**16**:699–713.

Sacks S, Sacks JY, McKendrick K, Banks S, Stommel J. Modified TC for MICA offenders: crime outcomes. *Behav Sci Law* 2004;**22**:477–501.

Scalora MJ, Garbin C. A multivariate analysis of sex offender recidivism. *Int J Offender Ther Comp Criminol* 2003;**47**:309–23.

Schaeffer CM, Borduin CM. Long-term follow-up to a randomized clinical trial of multisystemic therapy with serious and violent juvenile offenders. *J Consult Clin Psychol* 2005;**73**:445–53.

Scherer DG, Brondino MJ, Henggeler SW, Melton GB, Hanley JH. Multisystemic Family preservation therapy: preliminary findings from a study of rural and minority serious adolescent offenders. *J Emot Behav Disord* 1994;**2**:198–206.

Schippers GM, Van den Hurk AA, Breteler MH, Meerkerk GJ. Effectiveness of a drug-free detention treatment program in a Dutch prison. *Subst Use Misuse* 1998;**33**:1027–46.

Schoenwald SK, Ward DM, Henggeler SW, Pickrel SG, Patel H. Multisystemic therapy treatment of substance abusing or dependent adolescent offenders: Costs of reducing incarceration, inpatient, and residential placement. *J Child Fam Stud* 1996;**5**:431–44.

Scott KK, Tepas JJ, Frykberg E, Taylor PM, Plotkin AJ. Turning point: rethinking violence--evaluation of program efficacy in reducing adolescent violent crime recidivism. *J Trauma* 2002;**53**:21–7.

Seager JA, Jellicoe D, Dhaliwal GK. Refusers, dropouts, and completers: measuring sex offender treatment efficacy. *Int J Offender Ther Comp Criminol* 2004;**48**:600–12.

Sealock MD, Gottfredson DC, Gallagher CA. Drug treatment for juvenile offenders: Some good and bad news. *J Res Crime Delinq* 1997;**34**:210–36.

Shafer MS, Arthur B, Franczak MJ. An analysis of post-booking jail diversion programming for persons with co-occurring disorders. *Behav Sci Law* 2004;**22**:771–85.

Shepherd S. *Brief intervention for anxiety and depression*. From Prison Service Psychology Conference: Conference Proceedings. Boddis S, editor. 1991. pp. 209–18.

Sia TL, Dansereau DF, Czuchry ML. Treatment readiness training and probationers' evaluation of substance abuse treatment in a criminal justice setting. *J Subst Abuse Treat* 2000;**19**:459–467.

Smiley-McDonald HM, Leukefeld CG. Incarcerated clients' perceptions of therapeutic change in substance abuse treatment: a 4-year case study. *Int J Offender Ther Comp Criminol* 2005;**49**:574–89.

Solomon P, Draine J. One-year outcomes of a randomized trial of case management with seriously mentally ill clients leaving jail. *Eval Rev* 1995;**19**:256–73.

Solomon P, Draine J, Meyerson A. Jail recidivism and receipt of community mental health services. *Hosp Community Psychiatry* 1994;**45**:793–7.

St.Lawrence J, Crosby RA, Belcher L, Yazdani N, Brasfield TL. Sexual risk reduction and anger

management interventions for incarcerated male adolescents: A randomized controlled trial of two interventions. *J Sex Educ Ther* 1999;**24**:9–17.

Stallone TM. The effects of psychodrama on inmates within a structured residential behavior modification program. *J Group Psychother Psychodrama Sociom* 1993;**46**:24–31.

Steadman HJ, Naples M. Assessing the effectiveness of jail diversion programs for persons with serious mental illness and co-occurring substance use disorders. *Behav Sci Law* 2005;**23**:163–70.

Stein LAR, Colby SM, Barnett NP, Monti PM, Golembeske C, Lebeau-Craven R, Miranda R. Enhancing substance abuse treatment engagement in incarcerated adolescents. *Psychol Serv* 2006;**3**:25–34.

Stein SL, Garcia F, Marler B, Embree-Bever J, Garrett CJ, Unrein D, *et al*. A study of multiagency collaborative strategies: Did juvenile delinquents change? *J Community Psychol* 1992;**OSAP Special Issue**:88–105.

Studer LH, Aylwin AS, Reddon JR. Testosterone, sexual offense recidivism, and treatment effect among adult male sex offenders. *Sex Abuse* 2005;**17**:171–81.

Taxman FS, Thanner M. Risk, need, and responsivity (RNR): It all depends. *Crime Delinq* 2006;**52**:28–51.

Taylor BG, Davis RC, Maxwell CD. Effects of a group batterer treatment program: A Randomized experiment in Brooklyn. *Justice Q* 2001;**18**:171–201.

Taylor JL, Novaco RW, Gillmer BT, Robertson A, Thorne I. Individual cognitive-behavioural anger treatment for people with mild-borderline intellectual disabilities and histories of aggression: a controlled trial. *Br J Clin Psychol* 2005;**44**:367–82.

Tellefsen C, Cohen MI, Silver SB, Dougherty C. Predicting success on conditional release for insanity acquittees: regionalized versus nonregionalized hospital patients. *Bull Am Acad Psychiatry Law* 1992;**20**:87–100.

Thanner MH, Taxman FS. Responsivity: the value of providing intensive services to high-risk offenders. *J Subst Abuse Treat* 2003;**24**:137–47.

Thomas DH, Singh TH. Offenders referred to a learning disability service: a retrospective study from one county. *Br J Learn Disabil* 1995;**23**:24–7.

Thornton D, Beech A, Marshall WL. Pretreatment self-esteem and posttreatment sexual recidivism. *Int J Offender Ther Comp Criminol* 2004;**48**:587–99.

Tiihonen J, Hakola P, Eronen M, Vartiainen H, Ryynanen OP. Risk of homicidal behavior among discharged forensic psychiatric patients. *Forensic Sci Int* 1996;**79**:123–9.

Timmerman IG, Emmelkamp PM. The effects of cognitive-behavioral treatment for forensic inpatients. *Int J Offender Ther Comp Criminol* 2005;**49**:590–606.

Timmons-Mitchell J, Bender MB, Kishna MA, Mitchell CC. An Independent effectiveness trial of multisystemic therapy with juvenile justice youth. *J Clin Child Adolesc Psychol* 2006;**35**:227–36.

Turley A, Thornton T, Johnson C, Azzolino S. Jail drug and alcohol treatment program reduces recidivism in nonviolent offenders: a longitudinal study of Monroe County, New York's, Jail Treatment Drug and Alcohol Program. *Int J Offender Ther Comp Criminol* 2004;**48**:721–8.

Turner S, Petersilia J. Focusing on high-risk parolees: An experiment to reduce commitments to the Texas Department of Corrections. *J Res Crime Delinq* 1992;**29**:34–61.

Turner S, Petersilia J, Deschenes EP. Evaluating intensive supervision probation/parole (ISP) for drug offenders. *Crime Delinq* 1992;**38**:539–56.

Valentine PV, Smith TE. Evaluating traumatic incident reduction therapy with female inmates: a randomized controlled clinical trial. *Res Soc Work Pract* 2001;**11**:40–52.

Van Voorhis P, Spruance LM, Ritchey PN, Listwan SJ, Seabrook R. The Georgia Cognitive Skills Experiment: A replication of reasoning and rehabilitation. *Crim Justice Behav* 2004;**31**:282–305.

Vannoy SD, Hoyt WT. Evaluation of an anger therapy intervention for incarcerated adult males. *J Offender Rehabil* 2004;**39**:39–57.

Vaughn MS, Deng F, Lee LJ. Evaluating a prison-based drug treatment program in Taiwan. *J Drug Issues* 2003;**33**:357–84.

Ventura LA, Cassel CA, Jacoby JE, Huang B. Case management and recidivism of mentally ill persons released from jail. *Psychiatr Serv* 1998;**49**:1330–7.

Vigilante KC, Flynn MM, Affleck PC, Stunkle JC, Merriman NA, Flanigan TP, *et al*. Reduction in recidivism of incarcerated women through primary care, peer counseling, and discharge planning. *J Womens Health* 1999;**8**:409–15.

Viney LL, Henry RM, Campbell J. The impact of group work on offender adolescents. *J Couns Dev* 2001;**79**:373–81.

Waite D, Keller A, McGarvey EL, Wieckowski E, Pinkerton R, Brown GL. Juvenile sex offender re-arrest rates for sexual, violent nonsexual and property crimes: a 10-year follow-up. *Sex Abuse* 2005;**17**:313–31.

Weinrott MR, Riggan M, Frothingham S. Reducing deviant arousal in juvenile sex offenders using vicarious sensitization. *J Interpers Violence* 1997;**12**:704–28.

Wexler HK, De Leon G, Thomas G, Kressel D, Peters J. Amity Prison TC evaluation: reincarceration outcomes. *Crim Justice Behav* 1999;**26**:147–67.

Wexler HK, Melnick G, Cao Y. Risk and prison substance abuse treatment outcomes: A replication and challenge. *Prison J* 2004;**84**:106–20.

Wexler HK, Melnick G, Lowe L, Peters J. Three-year reincarceration outcomes for amity in-prison therapeutic community and aftercare in California. *Prison J* 1999;**79**:321–36.

Wiebush RG, Wagner D, McNulty B, Wang Y, Le TN. *Implementation and outcome evaluation of the Intensive Aftercare Program, Final Report.* 2005.

Wilson D, Tien G, Eaves D. Increasing the community tenure of mentally disordered offenders: An assertive case management program. *Int J Law Psychiatry* 1995;**18**:61–9.

Wilson GL. Psychotherapy with depressed incarcerated felons: a comparative evaluation of treatments. *Psychol Rep* 1990;**67**:1027–41.

Wright RC, Schneider SL. Mapping child molester treatment progress with the FoSOD: denial and explanations of accountability. *Sex Abuse* 2004;**16**:85–105.

Wright RD, Buzzell T, Wright SE, Gay F. Promoting Cognitive development among young offenders through pre-trial intervention. *J Offender Rehabil* 1994;**21**:203–19.

Zhao M, Hao W, Yang D, Xiao S, Li L, Zhang Y, *et al*. A modified therapeutic community-based rehabilitation programme for heroin dependence in reformatory school: a follow-up study. *Drug Alcohol Prof* 2002;**2**:10–19.

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By MacLeod A, Grant A, Donaldson C, Khan I, Campbell M, Daly C, *et al*.

No. 6
Effectiveness of hip prostheses in primary total hip replacement: a critical review of evidence and an economic model.
By Faulkner A, Kennedy LG, Baxter K, Donovan J, Wilkinson M, Bevan G.

No. 7
Antimicrobial prophylaxis in colorectal surgery: a systematic review of randomised controlled trials.
By Song F, Glenny AM.

No. 8
Bone marrow and peripheral blood stem cell transplantation for malignancy.
A review by Johnson PWM, Simnett SJ, Sweetenham JW, Morgan GJ, Stewart LA.

No. 9
Screening for speech and language delay: a systematic review of the literature.
By Law J, Boyle J, Harris F, Harkness A, Nye C.

No. 10
Resource allocation for chronic stable angina: a systematic review of effectiveness, costs and cost-effectiveness of alternative interventions.
By Sculpher MJ, Petticrew M, Kelland JL, Elliott RA, Holdright DR, Buxton MJ.

No. 11
Detection, adherence and control of hypertension for the prevention of stroke: a systematic review.
By Ebrahim S.

No. 12
Postoperative analgesia and vomiting, with special reference to day-case surgery: a systematic review.
By McQuay HJ, Moore RA.

No. 13
Choosing between randomised and nonrandomised studies: a systematic review.
By Britton A, McKee M, Black N, McPherson K, Sanderson C, Bain C.

No. 14
Evaluating patient-based outcome measures for use in clinical trials.
A review by Fitzpatrick R, Davey C, Buxton MJ, Jones DR.

No. 15
Ethical issues in the design and conduct of randomised controlled trials.
A review by Edwards SJL, Lilford RJ, Braunholtz DA, Jackson JC, Hewison J, Thornton J.

No. 16
Qualitative research methods in health technology assessment: a review of the literature.
By Murphy E, Dingwall R, Greatbatch D, Parker S, Watson P.

No. 17
The costs and benefits of paramedic skills in pre-hospital trauma care.
By Nicholl J, Hughes S, Dixon S, Turner J, Yates D.

No. 18
Systematic review of endoscopic ultrasound in gastro-oesophageal cancer.
By Harris KM, Kelly S, Berry E, Hutton J, Roderick P, Cullingworth J, *et al*.

No. 19
Systematic reviews of trials and other studies.
By Sutton AJ, Abrams KR, Jones DR, Sheldon TA, Song F.

No. 20
Primary total hip replacement surgery: a systematic review of outcomes and modelling of cost-effectiveness associated with different prostheses.
A review by Fitzpatrick R, Shortall E, Sculpher M, Murray D, Morris R, Lodge M, *et al*.

Volume 3, 1999

No. 1
Informed decision making: an annotated bibliography and systematic review.
By Bekker H, Thornton JG, Airey CM, Connelly JB, Hewison J, Robinson MB, *et al*.

No. 2
Handling uncertainty when performing economic evaluation of healthcare interventions.
A review by Briggs AH, Gray AM.

No. 3
The role of expectancies in the placebo effect and their use in the delivery of health care: a systematic review.
By Crow R, Gage H, Hampson S, Hart J, Kimber A, Thomas H.

No. 4
A randomised controlled trial of different approaches to universal antenatal HIV testing: uptake and acceptability. Annex: Antenatal HIV testing – assessment of a routine voluntary approach.
By Simpson WM, Johnstone FD, Boyd FM, Goldberg DJ, Hart GJ, Gormley SM, *et al*.

No. 5
Methods for evaluating area-wide and organisation-based interventions in health and health care: a systematic review.
By Ukoumunne OC, Gulliford MC, Chinn S, Sterne JAC, Burney PGJ.

No. 6
Assessing the costs of healthcare technologies in clinical trials.
A review by Johnston K, Buxton MJ, Jones DR, Fitzpatrick R.

No. 7
Cooperatives and their primary care emergency centres: organisation and impact.
By Hallam L, Henthorne K.

No. 8
Screening for cystic fibrosis.
A review by Murray J, Cuckle H, Taylor G, Littlewood J, Hewison J.

No. 9
A review of the use of health status measures in economic evaluation.
By Brazier J, Deverill M, Green C, Harper R, Booth A.

No. 10
Methods for the analysis of quality-of-life and survival data in health technology assessment.
A review by Billingham LJ, Abrams KR, Jones DR.

No. 11
Antenatal and neonatal haemoglobinopathy screening in the UK: review and economic analysis.
By Zeuner D, Ades AE, Karnon J, Brown J, Dezateux C, Anionwu EN.

No. 12
Assessing the quality of reports of randomised trials: implications for the conduct of meta-analyses.
A review by Moher D, Cook DJ, Jadad AR, Tugwell P, Moher M, Jones A, *et al*.

No. 13
'Early warning systems' for identifying new healthcare technologies.
By Robert G, Stevens A, Gabbay J.

No. 14
A systematic review of the role of human papillomavirus testing within a cervical screening programme.
By Cuzick J, Sasieni P, Davies P, Adams J, Normand C, Frater A, *et al*.

No. 15
Near patient testing in diabetes clinics: appraising the costs and outcomes.
By Grieve R, Beech R, Vincent J, Mazurkiewicz J.

No. 16
Positron emission tomography: establishing priorities for health technology assessment.
A review by Robert G, Milne R.

No. 17 (Pt 1)
The debridement of chronic wounds: a systematic review.
By Bradley M, Cullum N, Sheldon T.

No. 17 (Pt 2)
Systematic reviews of wound care management: (2) Dressings and topical agents used in the healing of chronic wounds.
By Bradley M, Cullum N, Nelson EA, Petticrew M, Sheldon T, Torgerson D.

No. 18
A systematic literature review of spiral and electron beam computed tomography: with particular reference to clinical applications in hepatic lesions, pulmonary embolus and coronary artery disease.
By Berry E, Kelly S, Hutton J, Harris KM, Roderick P, Boyce JC, *et al*.

No. 19
What role for statins? A review and economic model.
By Ebrahim S, Davey Smith G, McCabe C, Payne N, Pickin M, Sheldon TA, *et al*.

No. 20
Factors that limit the quality, number and progress of randomised controlled trials.
A review by Prescott RJ, Counsell CE, Gillespie WJ, Grant AM, Russell IT, Kiauka S, *et al*.

No. 21
Antimicrobial prophylaxis in total hip replacement: a systematic review.
By Glenny AM, Song F.

No. 22
Health promoting schools and health promotion in schools: two systematic reviews.
By Lister-Sharp D, Chapman S, Stewart-Brown S, Sowden A.

No. 23
Economic evaluation of a primary care-based education programme for patients with osteoarthritis of the knee.
A review by Lord J, Victor C, Littlejohns P, Ross FM, Axford JS.

Volume 4, 2000

No. 1
The estimation of marginal time preference in a UK-wide sample (TEMPUS) project.
A review by Cairns JA, van der Pol MM.

No. 2
Geriatric rehabilitation following fractures in older people: a systematic review.
By Cameron I, Crotty M, Currie C, Finnegan T, Gillespie L, Gillespie W, *et al*.

No. 3
Screening for sickle cell disease and thalassaemia: a systematic review with supplementary research.
By Davies SC, Cronin E, Gill M, Greengross P, Hickman M, Normand C.

No. 4
Community provision of hearing aids and related audiology services.
A review by Reeves DJ, Alborz A, Hickson FS, Bamford JM.

No. 5
False-negative results in screening programmes: systematic review of impact and implications.
By Petticrew MP, Sowden AJ, Lister-Sharp D, Wright K.

No. 6
Costs and benefits of community postnatal support workers: a randomised controlled trial.
By Morrell CJ, Spiby H, Stewart P, Walters S, Morgan A.

No. 7
Implantable contraceptives (subdermal implants and hormonally impregnated intrauterine systems) versus other forms of reversible contraceptives: two systematic reviews to assess relative effectiveness, acceptability, tolerability and cost-effectiveness.
By French RS, Cowan FM, Mansour DJA, Morris S, Procter T, Hughes D, *et al*.

No. 8
An introduction to statistical methods for health technology assessment.
A review by White SJ, Ashby D, Brown PJ.

No. 9
Disease-modifying drugs for multiple sclerosis: a rapid and systematic review.
By Clegg A, Bryant J, Milne R.

No. 10
Publication and related biases.
A review by Song F, Eastwood AJ, Gilbody S, Duley L, Sutton AJ.

No. 11
Cost and outcome implications of the organisation of vascular services.
By Michaels J, Brazier J, Palfreyman S, Shackley P, Slack R.

No. 12
Monitoring blood glucose control in diabetes mellitus: a systematic review.
By Coster S, Gulliford MC, Seed PT, Powrie JK, Swaminathan R.

No. 13
The effectiveness of domiciliary health visiting: a systematic review of international studies and a selective review of the British literature.
By Elkan R, Kendrick D, Hewitt M, Robinson JJA, Tolley K, Blair M, *et al*.

No. 14
The determinants of screening uptake and interventions for increasing uptake: a systematic review.
By Jepson R, Clegg A, Forbes C, Lewis R, Sowden A, Kleijnen J.

No. 15
The effectiveness and cost-effectiveness of prophylactic removal of wisdom teeth.
A rapid review by Song F, O'Meara S, Wilson P, Golder S, Kleijnen J.

No. 16
Ultrasound screening in pregnancy: a systematic review of the clinical effectiveness, cost-effectiveness and women's views.
By Bricker L, Garcia J, Henderson J, Mugford M, Neilson J, Roberts T, *et al*.

No. 17
A rapid and systematic review of the effectiveness and cost-effectiveness of the taxanes used in the treatment of advanced breast and ovarian cancer.
By Lister-Sharp D, McDonagh MS, Khan KS, Kleijnen J.

No. 18
Liquid-based cytology in cervical screening: a rapid and systematic review.
By Payne N, Chilcott J, McGoogan E.

No. 19
Randomised controlled trial of non-directive counselling, cognitive–behaviour therapy and usual general practitioner care in the management of depression as well as mixed anxiety and depression in primary care.
By King M, Sibbald B, Ward E, Bower P, Lloyd M, Gabbay M, *et al*.

No. 20
Routine referral for radiography of patients presenting with low back pain: is patients' outcome influenced by GPs' referral for plain radiography?
By Kerry S, Hilton S, Patel S, Dundas D, Rink E, Lord J.

No. 21
Systematic reviews of wound care management: (3) antimicrobial agents for chronic wounds; (4) diabetic foot ulceration.
By O'Meara S, Cullum N, Majid M, Sheldon T.

No. 22
Using routine data to complement and enhance the results of randomised controlled trials.
By Lewsey JD, Leyland AH, Murray GD, Boddy FA.

No. 23
Coronary artery stents in the treatment of ischaemic heart disease: a rapid and systematic review.
By Meads C, Cummins C, Jolly K, Stevens A, Burls A, Hyde C.

No. 24
Outcome measures for adult critical care: a systematic review.
By Hayes JA, Black NA, Jenkinson C, Young JD, Rowan KM, Daly K, *et al*.

No. 25
A systematic review to evaluate the effectiveness of interventions to promote the initiation of breastfeeding.
By Fairbank L, O'Meara S, Renfrew MJ, Woolridge M, Sowden AJ, Lister-Sharp D.

No. 26
Implantable cardioverter defibrillators: arrhythmias. A rapid and systematic review.
By Parkes J, Bryant J, Milne R.

No. 27
Treatments for fatigue in multiple sclerosis: a rapid and systematic review.
By Brañas P, Jordan R, Fry-Smith A, Burls A, Hyde C.

No. 28
Early asthma prophylaxis, natural history, skeletal development and economy (EASE): a pilot randomised controlled trial.
By Baxter-Jones ADG, Helms PJ, Russell G, Grant A, Ross S, Cairns JA, *et al*.

No. 29
Screening for hypercholesterolaemia versus case finding for familial hypercholesterolaemia: a systematic review and cost-effectiveness analysis.
By Marks D, Wonderling D, Thorogood M, Lambert H, Humphries SE, Neil HAW.

No. 30
A rapid and systematic review of the clinical effectiveness and cost-effectiveness of glycoprotein IIb/IIIa antagonists in the medical management of unstable angina.
By McDonagh MS, Bachmann LM, Golder S, Kleijnen J, ter Riet G.

No. 31
A randomised controlled trial of prehospital intravenous fluid replacement therapy in serious trauma.
By Turner J, Nicholl J, Webber L, Cox H, Dixon S, Yates D.

No. 32
Intrathecal pumps for giving opioids in chronic pain: a systematic review.
By Williams JE, Louw G, Towlerton G.

No. 33
Combination therapy (interferon alfa and ribavirin) in the treatment of chronic hepatitis C: a rapid and systematic review.
By Shepherd J, Waugh N, Hewitson P.

No. 34
A systematic review of comparisons of effect sizes derived from randomised and non-randomised studies.
By MacLehose RR, Reeves BC, Harvey IM, Sheldon TA, Russell IT, Black AMS.

No. 35
Intravascular ultrasound-guided interventions in coronary artery disease: a systematic literature review, with decision-analytic modelling, of outcomes and cost-effectiveness.
By Berry E, Kelly S, Hutton J, Lindsay HSJ, Blaxill JM, Evans JA, *et al*.

No. 36
A randomised controlled trial to evaluate the effectiveness and cost-effectiveness of counselling patients with chronic depression.
By Simpson S, Corney R, Fitzgerald P, Beecham J.

No. 37
Systematic review of treatments for atopic eczema.
By Hoare C, Li Wan Po A, Williams H.

No. 38
Bayesian methods in health technology assessment: a review.
By Spiegelhalter DJ, Myles JP, Jones DR, Abrams KR.

No. 39
The management of dyspepsia: a systematic review.
By Delaney B, Moayyedi P, Deeks J, Innes M, Soo S, Barton P, *et al*.

No. 40
A systematic review of treatments for severe psoriasis.
By Griffiths CEM, Clark CM, Chalmers RJG, Li Wan Po A, Williams HC.

Volume 5, 2001

No. 1
Clinical and cost-effectiveness of donepezil, rivastigmine and galantamine for Alzheimer's disease: a rapid and systematic review.
By Clegg A, Bryant J, Nicholson T, McIntyre L, De Broe S, Gerard K, *et al*.

No. 2
The clinical effectiveness and cost-effectiveness of riluzole for motor neurone disease: a rapid and systematic review.
By Stewart A, Sandercock J, Bryan S, Hyde C, Barton PM, Fry-Smith A, *et al*.

No. 3
Equity and the economic evaluation of healthcare.
By Sassi F, Archard L, Le Grand J.

No. 4
Quality-of-life measures in chronic diseases of childhood.
By Eiser C, Morse R.

No. 5
Eliciting public preferences for healthcare: a systematic review of techniques.
By Ryan M, Scott DA, Reeves C, Bate A, van Teijlingen ER, Russell EM, *et al*.

No. 6
General health status measures for people with cognitive impairment: learning disability and acquired brain injury.
By Riemsma RP, Forbes CA, Glanville JM, Eastwood AJ, Kleijnen J.

No. 7
An assessment of screening strategies for fragile X syndrome in the UK.
By Pembrey ME, Barnicoat AJ, Carmichael B, Bobrow M, Turner G.

No. 8
Issues in methodological research: perspectives from researchers and commissioners.
By Lilford RJ, Richardson A, Stevens A, Fitzpatrick R, Edwards S, Rock F, *et al*.

No. 9
Systematic reviews of wound care management: (5) beds; (6) compression; (7) laser therapy, therapeutic ultrasound, electrotherapy and electromagnetic therapy.
By Cullum N, Nelson EA, Flemming K, Sheldon T.

No. 10
Effects of educational and psychosocial interventions for adolescents with diabetes mellitus: a systematic review.
By Hampson SE, Skinner TC, Hart J, Storey L, Gage H, Foxcroft D, *et al*.

No. 11
Effectiveness of autologous chondrocyte transplantation for hyaline cartilage defects in knees: a rapid and systematic review.
By Jobanputra P, Parry D, Fry-Smith A, Burls A.

No. 12
Statistical assessment of the learning curves of health technologies.
By Ramsay CR, Grant AM, Wallace SA, Garthwaite PH, Monk AF, Russell IT.

No. 13
The effectiveness and cost-effectiveness of temozolomide for the treatment of recurrent malignant glioma: a rapid and systematic review.
By Dinnes J, Cave C, Huang S, Major K, Milne R.

No. 14
A rapid and systematic review of the clinical effectiveness and cost-effectiveness of debriding agents in treating surgical wounds healing by secondary intention.
By Lewis R, Whiting P, ter Riet G, O'Meara S, Glanville J.

No. 15
Home treatment for mental health problems: a systematic review.
By Burns T, Knapp M, Catty J, Healey A, Henderson J, Watt H, *et al*.

No. 16
How to develop cost-conscious guidelines.
By Eccles M, Mason J.

No. 17
The role of specialist nurses in multiple sclerosis: a rapid and systematic review.
By De Broe S, Christopher F, Waugh N.

No. 18
A rapid and systematic review of the clinical effectiveness and cost-effectiveness of orlistat in the management of obesity.
By O'Meara S, Riemsma R, Shirran L, Mather L, ter Riet G.

No. 19
The clinical effectiveness and cost-effectiveness of pioglitazone for type 2 diabetes mellitus: a rapid and systematic review.
By Chilcott J, Wight J, Lloyd Jones M, Tappenden P.

No. 20
Extended scope of nursing practice: a multicentre randomised controlled trial of appropriately trained nurses and preregistration house officers in preoperative assessment in elective general surgery.
By Kinley H, Czoski-Murray C, George S, McCabe C, Primrose J, Reilly C, *et al*.

No. 21
Systematic reviews of the effectiveness of day care for people with severe mental disorders: (1) Acute day hospital versus admission; (2) Vocational rehabilitation; (3) Day hospital versus outpatient care.
By Marshall M, Crowther R, Almaraz- Serrano A, Creed F, Sledge W, Kluiter H, *et al*.

No. 22
The measurement and monitoring of surgical adverse events.
By Bruce J, Russell EM, Mollison J, Krukowski ZH.

No. 23
Action research: a systematic review and guidance for assessment.
By Waterman H, Tillen D, Dickson R, de Koning K.

No. 24
A rapid and systematic review of the clinical effectiveness and cost-effectiveness of gemcitabine for the treatment of pancreatic cancer.
By Ward S, Morris E, Bansback N, Calvert N, Crellin A, Forman D, *et al*.

No. 25
A rapid and systematic review of the evidence for the clinical effectiveness and cost-effectiveness of irinotecan, oxaliplatin and raltitrexed for the treatment of advanced colorectal cancer.
By Lloyd Jones M, Hummel S, Bansback N, Orr B, Seymour M.

No. 26
Comparison of the effectiveness of inhaler devices in asthma and chronic obstructive airways disease: a systematic review of the literature.
By Brocklebank D, Ram F, Wright J, Barry P, Cates C, Davies L, *et al*.

No. 27
The cost-effectiveness of magnetic resonance imaging for investigation of the knee joint.
By Bryan S, Weatherburn G, Bungay H, Hatrick C, Salas C, Parry D, *et al*.

No. 28
A rapid and systematic review of the clinical effectiveness and cost-effectiveness of topotecan for ovarian cancer.
By Forbes C, Shirran L, Bagnall A-M, Duffy S, ter Riet G.

No. 29
Superseded by a report published in a later volume.

No. 30
The role of radiography in primary care patients with low back pain of at least 6 weeks duration: a randomised (unblinded) controlled trial.
By Kendrick D, Fielding K, Bentley E, Miller P, Kerslake R, Pringle M.

No. 31
Design and use of questionnaires: a review of best practice applicable to surveys of health service staff and patients.
By McColl E, Jacoby A, Thomas L, Soutter J, Bamford C, Steen N, *et al*.

No. 32
A rapid and systematic review of the clinical effectiveness and cost-effectiveness of paclitaxel, docetaxel, gemcitabine and vinorelbine in non-small-cell lung cancer.
By Clegg A, Scott DA, Sidhu M, Hewitson P, Waugh N.

No. 33
Subgroup analyses in randomised controlled trials: quantifying the risks of false-positives and false-negatives.
By Brookes ST, Whitley E, Peters TJ, Mulheran PA, Egger M, Davey Smith G.

No. 34
Depot antipsychotic medication in the treatment of patients with schizophrenia: (1) Meta-review; (2) Patient and nurse attitudes.
By David AS, Adams C.

No. 35
A systematic review of controlled trials of the effectiveness and cost-effectiveness of brief psychological treatments for depression.
By Churchill R, Hunot V, Corney R, Knapp M, McGuire H, Tylee A, *et al*.

No. 36
Cost analysis of child health surveillance.
By Sanderson D, Wright D, Acton C, Duree D.

Volume 6, 2002

No. 1
A study of the methods used to select review criteria for clinical audit.
By Hearnshaw H, Harker R, Cheater F, Baker R, Grimshaw G.

No. 2
Fludarabine as second-line therapy for B cell chronic lymphocytic leukaemia: a technology assessment.
By Hyde C, Wake B, Bryan S, Barton P, Fry-Smith A, Davenport C, *et al*.

No. 3
Rituximab as third-line treatment for refractory or recurrent Stage III or IV follicular non-Hodgkin's lymphoma: a systematic review and economic evaluation.
By Wake B, Hyde C, Bryan S, Barton P, Song F, Fry-Smith A, *et al*.

No. 4
A systematic review of discharge arrangements for older people.
By Parker SG, Peet SM, McPherson A, Cannaby AM, Baker R, Wilson A, *et al*.

No. 5
The clinical effectiveness and cost-effectiveness of inhaler devices used in the routine management of chronic asthma in older children: a systematic review and economic evaluation.
By Peters J, Stevenson M, Beverley C, Lim J, Smith S.

No. 6
The clinical effectiveness and cost-effectiveness of sibutramine in the management of obesity: a technology assessment.
By O'Meara S, Riemsma R, Shirran L, Mather L, ter Riet G.

No. 7
The cost-effectiveness of magnetic resonance angiography for carotid artery stenosis and peripheral vascular disease: a systematic review.
By Berry E, Kelly S, Westwood ME, Davies LM, Gough MJ, Bamford JM, *et al*.

No. 8
Promoting physical activity in South Asian Muslim women through 'exercise on prescription'.
By Carroll B, Ali N, Azam N.

No. 9
Zanamivir for the treatment of influenza in adults: a systematic review and economic evaluation.
By Burls A, Clark W, Stewart T, Preston C, Bryan S, Jefferson T, *et al*.

No. 10
A review of the natural history and epidemiology of multiple sclerosis: implications for resource allocation and health economic models.
By Richards RG, Sampson FC, Beard SM, Tappenden P.

No. 11
Screening for gestational diabetes: a systematic review and economic evaluation.
By Scott DA, Loveman E, McIntyre L, Waugh N.

No. 12
The clinical effectiveness and cost-effectiveness of surgery for people with morbid obesity: a systematic review and economic evaluation.
By Clegg AJ, Colquitt J, Sidhu MK, Royle P, Loveman E, Walker A.

No. 13
The clinical effectiveness of trastuzumab for breast cancer: a systematic review.
By Lewis R, Bagnall A-M, Forbes C, Shirran E, Duffy S, Kleijnen J, *et al*.

No. 14
The clinical effectiveness and cost-effectiveness of vinorelbine for breast cancer: a systematic review and economic evaluation.
By Lewis R, Bagnall A-M, King S, Woolacott N, Forbes C, Shirran L, *et al*.

No. 15
A systematic review of the effectiveness and cost-effectiveness of metal-on-metal hip resurfacing arthroplasty for treatment of hip disease.
By Vale L, Wyness L, McCormack K, McKenzie L, Brazzelli M, Stearns SC.

No. 16
The clinical effectiveness and cost-effectiveness of bupropion and nicotine replacement therapy for smoking cessation: a systematic review and economic evaluation.
By Woolacott NF, Jones L, Forbes CA, Mather LC, Sowden AJ, Song FJ, *et al*.

No. 17
A systematic review of effectiveness and economic evaluation of new drug treatments for juvenile idiopathic arthritis: etanercept.
By Cummins C, Connock M, Fry-Smith A, Burls A.

No. 18
Clinical effectiveness and cost-effectiveness of growth hormone in children: a systematic review and economic evaluation.
By Bryant J, Cave C, Mihaylova B, Chase D, McIntyre L, Gerard K, *et al*.

No. 19
Clinical effectiveness and cost-effectiveness of growth hormone in adults in relation to impact on quality of life: a systematic review and economic evaluation.
By Bryant J, Loveman E, Chase D, Mihaylova B, Cave C, Gerard K, *et al*.

No. 20
Clinical medication review by a pharmacist of patients on repeat prescriptions in general practice: a randomised controlled trial.
By Zermansky AG, Petty DR, Raynor DK, Lowe CJ, Freementle N, Vail A.

No. 21
The effectiveness of infliximab and etanercept for the treatment of rheumatoid arthritis: a systematic review and economic evaluation.
By Jobanputra P, Barton P, Bryan S, Burls A.

No. 22
A systematic review and economic evaluation of computerised cognitive behaviour therapy for depression and anxiety.
By Kaltenthaler E, Shackley P, Stevens K, Beverley C, Parry G, Chilcott J.

No. 23
A systematic review and economic evaluation of pegylated liposomal doxorubicin hydrochloride for ovarian cancer.
By Forbes C, Wilby J, Richardson G, Sculpher M, Mather L, Riemsma R.

No. 24
A systematic review of the effectiveness of interventions based on a stages-of-change approach to promote individual behaviour change.
By Riemsma RP, Pattenden J, Bridle C, Sowden AJ, Mather L, Watt IS, *et al*.

No. 25
A systematic review update of the clinical effectiveness and cost-effectiveness of glycoprotein IIb/IIIa antagonists.
By Robinson M, Ginnelly L, Sculpher M, Jones L, Riemsma R, Palmer S, *et al*.

No. 26
A systematic review of the effectiveness, cost-effectiveness and barriers to implementation of thrombolytic and neuroprotective therapy for acute ischaemic stroke in the NHS.
By Sandercock P, Berge E, Dennis M, Forbes J, Hand P, Kwan J, *et al*.

No. 27
A randomised controlled crossover trial of nurse practitioner versus doctor-led outpatient care in a bronchiectasis clinic.
By Caine N, Sharples LD, Hollingworth W, French J, Keogan M, Exley A, *et al*.

No. 28
Clinical effectiveness and cost – consequences of selective serotonin reuptake inhibitors in the treatment of sex offenders.
By Adi Y, Ashcroft D, Browne K, Beech A, Fry-Smith A, Hyde C.

No. 29
Treatment of established osteoporosis: a systematic review and cost–utility analysis.
By Kanis JA, Brazier JE, Stevenson M, Calvert NW, Lloyd Jones M.

No. 30
Which anaesthetic agents are cost-effective in day surgery? Literature review, national survey of practice and randomised controlled trial.
By Elliott RA Payne K, Moore JK, Davies LM, Harper NJN, St Leger AS, *et al*.

No. 31
Screening for hepatitis C among injecting drug users and in genitourinary medicine clinics: systematic reviews of effectiveness, modelling study and national survey of current practice.
By Stein K, Dalziel K, Walker A, McIntyre L, Jenkins B, Horne J, *et al*.

No. 32
The measurement of satisfaction with healthcare: implications for practice from a systematic review of the literature.
By Crow R, Gage H, Hampson S, Hart J, Kimber A, Storey L, *et al*.

No. 33
The effectiveness and cost-effectiveness of imatinib in chronic myeloid leukaemia: a systematic review.
By Garside R, Round A, Dalziel K, Stein K, Royle R.

No. 34
A comparative study of hypertonic saline, daily and alternate-day rhDNase in children with cystic fibrosis.
By Suri R, Wallis C, Bush A, Thompson S, Normand C, Flather M, *et al*.

No. 35
A systematic review of the costs and effectiveness of different models of paediatric home care.
By Parker G, Bhakta P, Lovett CA, Paisley S, Olsen R, Turner D, *et al*.

Volume 7, 2003

No. 1
How important are comprehensive literature searches and the assessment of trial quality in systematic reviews? Empirical study.
By Egger M, Jüni P, Bartlett C, Holenstein F, Sterne J.

No. 2
Systematic review of the effectiveness and cost-effectiveness, and economic evaluation, of home versus hospital or satellite unit haemodialysis for people with end-stage renal failure.
By Mowatt G, Vale L, Perez J, Wyness L, Fraser C, MacLeod A, *et al*.

No. 3
Systematic review and economic evaluation of the effectiveness of infliximab for the treatment of Crohn's disease.
By Clark W, Raftery J, Barton P, Song F, Fry-Smith A, Burls A.

No. 4
A review of the clinical effectiveness and cost-effectiveness of routine anti-D prophylaxis for pregnant women who are rhesus negative.
By Chilcott J, Lloyd Jones M, Wight J, Forman K, Wray J, Beverley C, *et al*.

No. 5
Systematic review and evaluation of the use of tumour markers in paediatric oncology: Ewing's sarcoma and neuroblastoma.
By Riley RD, Burchill SA, Abrams KR, Heney D, Lambert PC, Jones DR, *et al*.

No. 6
The cost-effectiveness of screening for *Helicobacter pylori* to reduce mortality and morbidity from gastric cancer and peptic ulcer disease: a discrete-event simulation model.
By Roderick P, Davies R, Raftery J, Crabbe D, Pearce R, Bhandari P, *et al*.

No. 7
The clinical effectiveness and cost-effectiveness of routine dental checks: a systematic review and economic evaluation.
By Davenport C, Elley K, Salas C, Taylor-Weetman CL, Fry-Smith A, Bryan S, *et al*.

No. 8
A multicentre randomised controlled trial assessing the costs and benefits of using structured information and analysis of women's preferences in the management of menorrhagia.
By Kennedy ADM, Sculpher MJ, Coulter A, Dwyer N, Rees M, Horsley S, *et al*.

No. 9
Clinical effectiveness and cost–utility of photodynamic therapy for wet age-related macular degeneration: a systematic review and economic evaluation.
By Meads C, Salas C, Roberts T, Moore D, Fry-Smith A, Hyde C.

No. 10
Evaluation of molecular tests for prenatal diagnosis of chromosome abnormalities.
By Grimshaw GM, Szczepura A, Hultén M, MacDonald F, Nevin NC, Sutton F, *et al*.

No. 11
First and second trimester antenatal screening for Down's syndrome: the results of the Serum, Urine and Ultrasound Screening Study (SURUSS).
By Wald NJ, Rodeck C, Hackshaw AK, Walters J, Chitty L, Mackinson AM.

No. 12
The effectiveness and cost-effectiveness of ultrasound locating devices for central venous access: a systematic review and economic evaluation.
By Calvert N, Hind D, McWilliams RG, Thomas SM, Beverley C, Davidson A.

No. 13
A systematic review of atypical antipsychotics in schizophrenia.
By Bagnall A-M, Jones L, Lewis R, Ginnelly L, Glanville J, Torgerson D, *et al.*

No. 14
Prostate Testing for Cancer and Treatment (ProtecT) feasibility study.
By Donovan J, Hamdy F, Neal D, Peters T, Oliver S, Brindle L, *et al*.

No. 15
Early thrombolysis for the treatment of acute myocardial infarction: a systematic review and economic evaluation.
By Boland A, Dundar Y, Bagust A, Haycox A, Hill R, Mujica Mota R, *et al*.

No. 16
Screening for fragile X syndrome: a literature review and modelling.
By Song FJ, Barton P, Sleightholme V, Yao GL, Fry-Smith A.

No. 17
Systematic review of endoscopic sinus surgery for nasal polyps.
By Dalziel K, Stein K, Round A, Garside R, Royle P.

No. 18
Towards efficient guidelines: how to monitor guideline use in primary care.
By Hutchinson A, McIntosh A, Cox S, Gilbert C.

No. 19
Effectiveness and cost-effectiveness of acute hospital-based spinal cord injuries services: systematic review.
By Bagnall A-M, Jones L, Richardson G, Duffy S, Riemsma R.

No. 20
Prioritisation of health technology assessment. The PATHS model: methods and case studies.
By Townsend J, Buxton M, Harper G.

No. 21
Systematic review of the clinical effectiveness and cost-effectiveness of tension-free vaginal tape for treatment of urinary stress incontinence.
By Cody J, Wyness L, Wallace S, Glazener C, Kilonzo M, Stearns S, *et al*.

No. 22
The clinical and cost-effectiveness of patient education models for diabetes: a systematic review and economic evaluation.
By Loveman E, Cave C, Green C, Royle P, Dunn N, Waugh N.

No. 23
The role of modelling in prioritising and planning clinical trials.
By Chilcott J, Brennan A, Booth A, Karnon J, Tappenden P.

No. 24
Cost–benefit evaluation of routine influenza immunisation in people 65–74 years of age.
By Allsup S, Gosney M, Haycox A, Regan M.

No. 25
The clinical and cost-effectiveness of pulsatile machine perfusion versus cold storage of kidneys for transplantation retrieved from heart-beating and non-heart-beating donors.
By Wight J, Chilcott J, Holmes M, Brewer N.

No. 26
Can randomised trials rely on existing electronic data? A feasibility study to explore the value of routine data in health technology assessment.
By Williams JG, Cheung WY, Cohen DR, Hutchings HA, Longo MF, Russell IT.

No. 27
Evaluating non-randomised intervention studies.
By Deeks JJ, Dinnes J, D'Amico R, Sowden AJ, Sakarovitch C, Song F, *et al*.

No. 28
A randomised controlled trial to assess the impact of a package comprising a patient-orientated, evidence-based self-help guidebook and patient-centred consultations on disease management and satisfaction in inflammatory bowel disease.
By Kennedy A, Nelson E, Reeves D, Richardson G, Roberts C, Robinson A, *et al*.

No. 29
The effectiveness of diagnostic tests for the assessment of shoulder pain due to soft tissue disorders: a systematic review.
By Dinnes J, Loveman E, McIntyre L, Waugh N.

No. 30
The value of digital imaging in diabetic retinopathy.
By Sharp PF, Olson J, Strachan F, Hipwell J, Ludbrook A, O'Donnell M, *et al*.

No. 31
Lowering blood pressure to prevent myocardial infarction and stroke: a new preventive strategy.
By Law M, Wald N, Morris J.

No. 32
Clinical and cost-effectiveness of capecitabine and tegafur with uracil for the treatment of metastatic colorectal cancer: systematic review and economic evaluation.
By Ward S, Kaltenthaler E, Cowan J, Brewer N.

No. 33
Clinical and cost-effectiveness of new and emerging technologies for early localised prostate cancer: a systematic review.
By Hummel S, Paisley S, Morgan A, Currie E, Brewer N.

No. 34
Literature searching for clinical and cost-effectiveness studies used in health technology assessment reports carried out for the National Institute for Clinical Excellence appraisal system.
By Royle P, Waugh N.

No. 35
Systematic review and economic decision modelling for the prevention and treatment of influenza A and B.
By Turner D, Wailoo A, Nicholson K, Cooper N, Sutton A, Abrams K.

No. 36
A randomised controlled trial to evaluate the clinical and cost-effectiveness of Hickman line insertions in adult cancer patients by nurses.
By Boland A, Haycox A, Bagust A, Fitzsimmons L.

No. 37
Redesigning postnatal care: a randomised controlled trial of protocol-based midwifery-led care focused on individual women's physical and psychological health needs.
By MacArthur C, Winter HR, Bick DE, Lilford RJ, Lancashire RJ, Knowles H, *et al*.

No. 38
Estimating implied rates of discount in healthcare decision-making.
By West RR, McNabb R, Thompson AGH, Sheldon TA, Grimley Evans J.

No. 39
Systematic review of isolation policies in the hospital management of methicillin-resistant *Staphylococcus aureus*: a review of the literature with epidemiological and economic modelling.
By Cooper BS, Stone SP, Kibbler CC, Cookson BD, Roberts JA, Medley GF, *et al*.

No. 40
Treatments for spasticity and pain in multiple sclerosis: a systematic review.
By Beard S, Hunn A, Wight J.

No. 41
The inclusion of reports of randomised trials published in languages other than English in systematic reviews.
By Moher D, Pham B, Lawson ML, Klassen TP.

No. 42
The impact of screening on future health-promoting behaviours and health beliefs: a systematic review.
By Bankhead CR, Brett J, Bukach C, Webster P, Stewart-Brown S, Munafo M, *et al*.

Volume 8, 2004

No. 1
What is the best imaging strategy for acute stroke?
By Wardlaw JM, Keir SL, Seymour J, Lewis S, Sandercock PAG, Dennis MS, *et al*.

No. 2
Systematic review and modelling of the investigation of acute and chronic chest pain presenting in primary care.
By Mant J, McManus RJ, Oakes RAL, Delaney BC, Barton PM, Deeks JJ, *et al*.

No. 3
The effectiveness and cost-effectiveness of microwave and thermal balloon endometrial ablation for heavy menstrual bleeding: a systematic review and economic modelling.
By Garside R, Stein K, Wyatt K, Round A, Price A.

No. 4
A systematic review of the role of bisphosphonates in metastatic disease.
By Ross JR, Saunders Y, Edmonds PM, Patel S, Wonderling D, Normand C, *et al*.

No. 5
Systematic review of the clinical effectiveness and cost-effectiveness of capecitabine (Xeloda®) for locally advanced and/or metastatic breast cancer.
By Jones L, Hawkins N, Westwood M, Wright K, Richardson G, Riemsma R.

No. 6
Effectiveness and efficiency of guideline dissemination and implementation strategies.
By Grimshaw JM, Thomas RE, MacLennan G, Fraser C, Ramsay CR, Vale L, *et al*.

No. 7
Clinical effectiveness and costs of the Sugarbaker procedure for the treatment of pseudomyxoma peritonei.
By Bryant J, Clegg AJ, Sidhu MK, Brodin H, Royle P, Davidson P.

No. 8
Psychological treatment for insomnia in the regulation of long-term hypnotic drug use.
By Morgan K, Dixon S, Mathers N, Thompson J, Tomeny M.

No. 9
Improving the evaluation of therapeutic interventions in multiple sclerosis: development of a patient-based measure of outcome.
By Hobart JC, Riazi A, Lamping DL, Fitzpatrick R, Thompson AJ.

No. 10
A systematic review and economic evaluation of magnetic resonance cholangiopancreatography compared with diagnostic endoscopic retrograde cholangiopancreatography.
By Kaltenthaler E, Bravo Vergel Y, Chilcott J, Thomas S, Blakeborough T, Walters SJ, *et al*.

No. 11
The use of modelling to evaluate new drugs for patients with a chronic condition: the case of antibodies against tumour necrosis factor in rheumatoid arthritis.
By Barton P, Jobanputra P, Wilson J, Bryan S, Burls A.

No. 12
Clinical effectiveness and cost-effectiveness of neonatal screening for inborn errors of metabolism using tandem mass spectrometry: a systematic review.
By Pandor A, Eastham J, Beverley C, Chilcott J, Paisley S.

No. 13
Clinical effectiveness and cost-effectiveness of pioglitazone and rosiglitazone in the treatment of type 2 diabetes: a systematic review and economic evaluation.
By Czoski-Murray C, Warren E, Chilcott J, Beverley C, Psyllaki MA, Cowan J.

No. 14
Routine examination of the newborn: the EMREN study. Evaluation of an extension of the midwife role including a randomised controlled trial of appropriately trained midwives and paediatric senior house officers.
By Townsend J, Wolke D, Hayes J, Davé S, Rogers C, Bloomfield L, *et al*.

No. 15
Involving consumers in research and development agenda setting for the NHS: developing an evidence-based approach.
By Oliver S, Clarke-Jones L, Rees R, Milne R, Buchanan P, Gabbay J, *et al*.

No. 16
A multi-centre randomised controlled trial of minimally invasive direct coronary bypass grafting versus percutaneous transluminal coronary angioplasty with stenting for proximal stenosis of the left anterior descending coronary artery.
By Reeves BC, Angelini GD, Bryan AJ, Taylor FC, Cripps T, Spyt TJ, *et al*.

No. 17
Does early magnetic resonance imaging influence management or improve outcome in patients referred to secondary care with low back pain? A pragmatic randomised controlled trial.
By Gilbert FJ, Grant AM, Gillan MGC, Vale L, Scott NW, Campbell MK, *et al*.

No. 18
The clinical and cost-effectiveness of anakinra for the treatment of rheumatoid arthritis in adults: a systematic review and economic analysis.
By Clark W, Jobanputra P, Barton P, Burls A.

No. 19
A rapid and systematic review and economic evaluation of the clinical and cost-effectiveness of newer drugs for treatment of mania associated with bipolar affective disorder.
By Bridle C, Palmer S, Bagnall A-M, Darba J, Duffy S, Sculpher M, *et al*.

No. 20
Liquid-based cytology in cervical screening: an updated rapid and systematic review and economic analysis.
By Karnon J, Peters J, Platt J, Chilcott J, McGoogan E, Brewer N.

No. 21
Systematic review of the long-term effects and economic consequences of treatments for obesity and implications for health improvement.
By Avenell A, Broom J, Brown TJ, Poobalan A, Aucott L, Stearns SC, *et al*.

No. 22
Autoantibody testing in children with newly diagnosed type 1 diabetes mellitus.
By Dretzke J, Cummins C, Sandercock J, Fry-Smith A, Barrett T, Burls A.

No. 23
Clinical effectiveness and cost-effectiveness of prehospital intravenous fluids in trauma patients.
By Dretzke J, Sandercock J, Bayliss S, Burls A.

No. 24
Newer hypnotic drugs for the short-term management of insomnia: a systematic review and economic evaluation.
By Dündar Y, Boland A, Strobl J, Dodd S, Haycox A, Bagust A, *et al*.

No. 25
Development and validation of methods for assessing the quality of diagnostic accuracy studies.
By Whiting P, Rutjes AWS, Dinnes J, Reitsma JB, Bossuyt PMM, Kleijnen J.

No. 26
EVALUATE hysterectomy trial: a multicentre randomised trial comparing abdominal, vaginal and laparoscopic methods of hysterectomy.
By Garry R, Fountain J, Brown J, Manca A, Mason S, Sculpher M, *et al*.

No. 27
Methods for expected value of information analysis in complex health economic models: developments on the health economics of interferon-β and glatiramer acetate for multiple sclerosis.
By Tappenden P, Chilcott JB, Eggington S, Oakley J, McCabe C.

No. 28
Effectiveness and cost-effectiveness of imatinib for first-line treatment of chronic myeloid leukaemia in chronic phase: a systematic review and economic analysis.
By Dalziel K, Round A, Stein K, Garside R, Price A.

No. 29
VenUS I: a randomised controlled trial of two types of bandage for treating venous leg ulcers.
By Iglesias C, Nelson EA, Cullum NA, Torgerson DJ, on behalf of the VenUS Team.

No. 30
Systematic review of the effectiveness and cost-effectiveness, and economic evaluation, of myocardial perfusion scintigraphy for the diagnosis and management of angina and myocardial infarction.
By Mowatt G, Vale L, Brazzelli M, Hernandez R, Murray A, Scott N, *et al*.

No. 31
A pilot study on the use of decision theory and value of information analysis as part of the NHS Health Technology Assessment programme.
By Claxton K, Ginnelly L, Sculpher M, Philips Z, Palmer S.

No. 32
The Social Support and Family Health Study: a randomised controlled trial and economic evaluation of two alternative forms of postnatal support for mothers living in disadvantaged inner-city areas.
By Wiggins M, Oakley A, Roberts I, Turner H, Rajan L, Austerberry H, *et al*.

No. 33
Psychosocial aspects of genetic screening of pregnant women and newborns: a systematic review.
By Green JM, Hewison J, Bekker HL, Bryant, Cuckle HS.

No. 34
Evaluation of abnormal uterine bleeding: comparison of three outpatient procedures within cohorts defined by age and menopausal status.
By Critchley HOD, Warner P, Lee AJ, Brechin S, Guise J, Graham B.

No. 35
Coronary artery stents: a rapid systematic review and economic evaluation.
By Hill R, Bagust A, Bakhai A, Dickson R, Dündar Y, Haycox A, *et al*.

No. 36
Review of guidelines for good practice in decision-analytic modelling in health technology assessment.
By Philips Z, Ginnelly L, Sculpher M, Claxton K, Golder S, Riemsma R, *et al*.

No. 37
Rituximab (MabThera®) for aggressive non-Hodgkin's lymphoma: systematic review and economic evaluation.
By Knight C, Hind D, Brewer N, Abbott V.

No. 38
Clinical effectiveness and cost-effectiveness of clopidogrel and modified-release dipyridamole in the secondary prevention of occlusive vascular events: a systematic review and economic evaluation.
By Jones L, Griffin S, Palmer S, Main C, Orton V, Sculpher M, *et al.*

No. 39
Pegylated interferon α-2a and -2b in combination with ribavirin in the treatment of chronic hepatitis C: a systematic review and economic evaluation.
By Shepherd J, Brodin H, Cave C, Waugh N, Price A, Gabbay J.

No. 40
Clopidogrel used in combination with aspirin compared with aspirin alone in the treatment of non-ST-segment-elevation acute coronary syndromes: a systematic review and economic evaluation.
By Main C, Palmer S, Griffin S, Jones L, Orton V, Sculpher M, *et al.*

No. 41
Provision, uptake and cost of cardiac rehabilitation programmes: improving services to under-represented groups.
By Beswick AD, Rees K, Griebsch I, Taylor FC, Burke M, West RR, *et al.*

No. 42
Involving South Asian patients in clinical trials.
By Hussain-Gambles M, Leese B, Atkin K, Brown J, Mason S, Tovey P.

No. 43
Clinical and cost-effectiveness of continuous subcutaneous insulin infusion for diabetes.
By Colquitt JL, Green C, Sidhu MK, Hartwell D, Waugh N.

No. 44
Identification and assessment of ongoing trials in health technology assessment reviews.
By Song FJ, Fry-Smith A, Davenport C, Bayliss S, Adi Y, Wilson JS, *et al*.

No. 45
Systematic review and economic evaluation of a long-acting insulin analogue, insulin glargine
By Warren E, Weatherley-Jones E, Chilcott J, Beverley C.

No. 46
Supplementation of a home-based exercise programme with a class-based programme for people with osteoarthritis of the knees: a randomised controlled trial and health economic analysis.
By McCarthy CJ, Mills PM, Pullen R, Richardson G, Hawkins N, Roberts CR, *et al*.

No. 47
Clinical and cost-effectiveness of once-daily versus more frequent use of same potency topical corticosteroids for atopic eczema: a systematic review and economic evaluation.
By Green C, Colquitt JL, Kirby J, Davidson P, Payne E.

No. 48
Acupuncture of chronic headache disorders in primary care: randomised controlled trial and economic analysis.
By Vickers AJ, Rees RW, Zollman CE, McCarney R, Smith CM, Ellis N, *et al*.

No. 49
Generalisability in economic evaluation studies in healthcare: a review and case studies.
By Sculpher MJ, Pang FS, Manca A, Drummond MF, Golder S, Urdahl H, *et al*.

No. 50
Virtual outreach: a randomised controlled trial and economic evaluation of joint teleconferenced medical consultations.
By Wallace P, Barber J, Clayton W, Currell R, Fleming K, Garner P, *et al*.

Volume 9, 2005

No. 1
Randomised controlled multiple treatment comparison to provide a cost-effectiveness rationale for the selection of antimicrobial therapy in acne.
By Ozolins M, Eady EA, Avery A, Cunliffe WJ, O'Neill C, Simpson NB, *et al*.

No. 2
Do the findings of case series studies vary significantly according to methodological characteristics?
By Dalziel K, Round A, Stein K, Garside R, Castelnuovo E, Payne L.

No. 3
Improving the referral process for familial breast cancer genetic counselling: findings of three randomised controlled trials of two interventions.
By Wilson BJ, Torrance N, Mollison J, Wordsworth S, Gray JR, Haites NE, *et al*.

No. 4
Randomised evaluation of alternative electrosurgical modalities to treat bladder outflow obstruction in men with benign prostatic hyperplasia.
By Fowler C, McAllister W, Plail R, Karim O, Yang Q.

No. 5
A pragmatic randomised controlled trial of the cost-effectiveness of palliative therapies for patients with inoperable oesophageal cancer.
By Shenfine J, McNamee P, Steen N, Bond J, Griffin SM.

No. 6
Impact of computer-aided detection prompts on the sensitivity and specificity of screening mammography.
By Taylor P, Champness J, Given-Wilson R, Johnston K, Potts H.

No. 7
Issues in data monitoring and interim analysis of trials.
By Grant AM, Altman DG, Babiker AB, Campbell MK, Clemens FJ, Darbyshire JH, *et al*.

No. 8
Lay public's understanding of equipoise and randomisation in randomised controlled trials.
By Robinson EJ, Kerr CEP, Stevens AJ, Lilford RJ, Braunholtz DA, Edwards SJ, *et al*.

No. 9
Clinical and cost-effectiveness of electroconvulsive therapy for depressive illness, schizophrenia, catatonia and mania: systematic reviews and economic modelling studies.
By Greenhalgh J, Knight C, Hind D, Beverley C, Walters S.

No. 10
Measurement of health-related quality of life for people with dementia: development of a new instrument (DEMQOL) and an evaluation of current methodology.
By Smith SC, Lamping DL, Banerjee S, Harwood R, Foley B, Smith P, *et al*.

No. 11
Clinical effectiveness and cost-effectiveness of drotrecogin alfa (activated) (Xigris®) for the treatment of severe sepsis in adults: a systematic review and economic evaluation.
By Green C, Dinnes J, Takeda A, Shepherd J, Hartwell D, Cave C, *et al*.

No. 12
A methodological review of how heterogeneity has been examined in systematic reviews of diagnostic test accuracy.
By Dinnes J, Deeks J, Kirby J, Roderick P.

No. 13
Cervical screening programmes: can automation help? Evidence from systematic reviews, an economic analysis and a simulation modelling exercise applied to the UK.
By Willis BH, Barton P, Pearmain P, Bryan S, Hyde C.

No. 14
Laparoscopic surgery for inguinal hernia repair: systematic review of effectiveness and economic evaluation.
By McCormack K, Wake B, Perez J, Fraser C, Cook J, McIntosh E, *et al*.

No. 15
Clinical effectiveness, tolerability and cost-effectiveness of newer drugs for epilepsy in adults: a systematic review and economic evaluation.
By Wilby J, Kainth A, Hawkins N, Epstein D, McIntosh H, McDaid C, *et al*.

No. 16
A randomised controlled trial to compare the cost-effectiveness of tricyclic antidepressants, selective serotonin reuptake inhibitors and lofepramine.
By Peveler R, Kendrick T, Buxton M, Longworth L, Baldwin D, Moore M, *et al*.

No. 17
Clinical effectiveness and cost-effectiveness of immediate angioplasty for acute myocardial infarction: systematic review and economic evaluation.
By Hartwell D, Colquitt J, Loveman E, Clegg AJ, Brodin H, Waugh N, *et al*.

No. 18
A randomised controlled comparison of alternative strategies in stroke care.
By Kalra L, Evans A, Perez I, Knapp M, Swift C, Donaldson N.

No. 19
The investigation and analysis of critical incidents and adverse events in healthcare.
By Woloshynowych M, Rogers S, Taylor-Adams S, Vincent C.

No. 20
Potential use of routine databases in health technology assessment.
By Raftery J, Roderick P, Stevens A.

No. 21
Clinical and cost-effectiveness of newer immunosuppressive regimens in renal transplantation: a systematic review and modelling study.
By Woodroffe R, Yao GL, Meads C, Bayliss S, Ready A, Raftery J, *et al*.

No. 22
A systematic review and economic evaluation of alendronate, etidronate, risedronate, raloxifene and teriparatide for the prevention and treatment of postmenopausal osteoporosis.
By Stevenson M, Lloyd Jones M, De Nigris E, Brewer N, Davis S, Oakley J.

No. 23
A systematic review to examine the impact of psycho-educational interventions on health outcomes and costs in adults and children with difficult asthma.
By Smith JR, Mugford M, Holland R, Candy B, Noble MJ, Harrison BDW, *et al*.

No. 24
An evaluation of the costs, effectiveness and quality of renal replacement therapy provision in renal satellite units in England and Wales.
By Roderick P, Nicholson T, Armitage A, Mehta R, Mullee M, Gerard K, *et al*.

No. 25
Imatinib for the treatment of patients with unresectable and/or metastatic gastrointestinal stromal tumours: systematic review and economic evaluation.
By Wilson J, Connock M, Song F, Yao G, Fry-Smith A, Raftery J, *et al*.

No. 26
Indirect comparisons of competing interventions.
By Glenny AM, Altman DG, Song F, Sakarovitch C, Deeks JJ, D'Amico R, *et al*.

No. 27
Cost-effectiveness of alternative strategies for the initial medical management of non-ST elevation acute coronary syndrome: systematic review and decision-analytical modelling.
By Robinson M, Palmer S, Sculpher M, Philips Z, Ginnelly L, Bowens A, *et al*.

No. 28
Outcomes of electrically stimulated gracilis neosphincter surgery.
By Tillin T, Chambers M, Feldman R.

No. 29
The effectiveness and cost-effectiveness of pimecrolimus and tacrolimus for atopic eczema: a systematic review and economic evaluation.
By Garside R, Stein K, Castelnuovo E, Pitt M, Ashcroft D, Dimmock P, *et al*.

No. 30
Systematic review on urine albumin testing for early detection of diabetic complications.
By Newman DJ, Mattock MB, Dawnay ABS, Kerry S, McGuire A, Yaqoob M, *et al*.

No. 31
Randomised controlled trial of the cost-effectiveness of water-based therapy for lower limb osteoarthritis.
By Cochrane T, Davey RC, Matthes Edwards SM.

No. 32
Longer term clinical and economic benefits of offering acupuncture care to patients with chronic low back pain.
By Thomas KJ, MacPherson H, Ratcliffe J, Thorpe L, Brazier J, Campbell M, *et al*.

No. 33
Cost-effectiveness and safety of epidural steroids in the management of sciatica.
By Price C, Arden N, Coglan L, Rogers P.

No. 34
The British Rheumatoid Outcome Study Group (BROSG) randomised controlled trial to compare the effectiveness and cost-effectiveness of aggressive versus symptomatic therapy in established rheumatoid arthritis.
By Symmons D, Tricker K, Roberts C, Davies L, Dawes P, Scott DL.

No. 35
Conceptual framework and systematic review of the effects of participants' and professionals' preferences in randomised controlled trials.
By King M, Nazareth I, Lampe F, Bower P, Chandler M, Morou M, *et al*.

No. 36
The clinical and cost-effectiveness of implantable cardioverter defibrillators: a systematic review.
By Bryant J, Brodin H, Loveman E, Payne E, Clegg A.

No. 37
A trial of problem-solving by community mental health nurses for anxiety, depression and life difficulties among general practice patients. The CPN-GP study.
By Kendrick T, Simons L, Mynors-Wallis L, Gray A, Lathlean J, Pickering R, *et al*.

No. 38
The causes and effects of socio-demographic exclusions from clinical trials.
By Bartlett C, Doyal L, Ebrahim S, Davey P, Bachmann M, Egger M, *et al*.

No. 39
Is hydrotherapy cost-effective? A randomised controlled trial of combined hydrotherapy programmes compared with physiotherapy land techniques in children with juvenile idiopathic arthritis.
By Epps H, Ginnelly L, Utley M, Southwood T, Gallivan S, Sculpher M, *et al*.

No. 40
A randomised controlled trial and cost-effectiveness study of systematic screening (targeted and total population screening) versus routine practice for the detection of atrial fibrillation in people aged 65 and over. The SAFE study.
By Hobbs FDR, Fitzmaurice DA, Mant J, Murray E, Jowett S, Bryan S, *et al*.

No. 41
Displaced intracapsular hip fractures in fit, older people: a randomised comparison of reduction and fixation, bipolar hemiarthroplasty and total hip arthroplasty.
By Keating JF, Grant A, Masson M, Scott NW, Forbes JF.

No. 42
Long-term outcome of cognitive behaviour therapy clinical trials in central Scotland.
By Durham RC, Chambers JA, Power KG, Sharp DM, Macdonald RR, Major KA, *et al*.

No. 43
The effectiveness and cost-effectiveness of dual-chamber pacemakers compared with single-chamber pacemakers for bradycardia due to atrioventricular block or sick sinus syndrome: systematic review and economic evaluation.
By Castelnuovo E, Stein K, Pitt M, Garside R, Payne E.

No. 44
Newborn screening for congenital heart defects: a systematic review and cost-effectiveness analysis.
By Knowles R, Griebsch I, Dezateux C, Brown J, Bull C, Wren C.

No. 45
The clinical and cost-effectiveness of left ventricular assist devices for end-stage heart failure: a systematic review and economic evaluation.
By Clegg AJ, Scott DA, Loveman E, Colquitt J, Hutchinson J, Royle P, *et al*.

No. 46
The effectiveness of the Heidelberg Retina Tomograph and laser diagnostic glaucoma scanning system (GDx) in detecting and monitoring glaucoma.
By Kwartz AJ, Henson DB, Harper RA, Spencer AF, McLeod D.

No. 47
Clinical and cost-effectiveness of autologous chondrocyte implantation for cartilage defects in knee joints: systematic review and economic evaluation.
By Clar C, Cummins E, McIntyre L, Thomas S, Lamb J, Bain L, *et al*.

No. 48
Systematic review of effectiveness of different treatments for childhood retinoblastoma.
By McDaid C, Hartley S, Bagnall A-M, Ritchie G, Light K, Riemsma R.

No. 49
Towards evidence-based guidelines for the prevention of venous thromboembolism: systematic reviews of mechanical methods, oral anticoagulation, dextran and regional anaesthesia as thromboprophylaxis.
By Roderick P, Ferris G, Wilson K, Halls H, Jackson D, Collins R, *et al*.

No. 50
The effectiveness and cost-effectiveness of parent training/education programmes for the treatment of conduct disorder, including oppositional defiant disorder, in children.
By Dretzke J, Frew E, Davenport C, Barlow J, Stewart-Brown S, Sandercock J, *et al*.

Volume 10, 2006

No. 1
The clinical and cost-effectiveness of donepezil, rivastigmine, galantamine and memantine for Alzheimer's disease.
By Loveman E, Green C, Kirby J, Takeda A, Picot J, Payne E, *et al*.

No. 2
FOOD: a multicentre randomised trial evaluating feeding policies in patients admitted to hospital with a recent stroke.
By Dennis M, Lewis S, Cranswick G, Forbes J.

No. 3
The clinical effectiveness and cost-effectiveness of computed tomography screening for lung cancer: systematic reviews.
By Black C, Bagust A, Boland A, Walker S, McLeod C, De Verteuil R, *et al*.

No. 4
A systematic review of the effectiveness and cost-effectiveness of neuroimaging assessments used to visualise the seizure focus in people with refractory epilepsy being considered for surgery.
By Whiting P, Gupta R, Burch J, Mujica Mota RE, Wright K, Marson A, *et al*.

No. 5
Comparison of conference abstracts and presentations with full-text articles in the health technology assessments of rapidly evolving technologies.
By Dundar Y, Dodd S, Dickson R, Walley T, Haycox A, Williamson PR.

No. 6
Systematic review and evaluation of methods of assessing urinary incontinence.
By Martin JL, Williams KS, Abrams KR, Turner DA, Sutton AJ, Chapple C, *et al*.

No. 7
The clinical effectiveness and cost-effectiveness of newer drugs for children with epilepsy. A systematic review.
By Connock M, Frew E, Evans B-W, Bryan S, Cummins C, Fry-Smith A, *et al*.

No. 8
Surveillance of Barrett's oesophagus: exploring the uncertainty through systematic review, expert workshop and economic modelling.
By Garside R, Pitt M, Somerville M, Stein K, Price A, Gilbert N.

No. 9
Topotecan, pegylated liposomal doxorubicin hydrochloride and paclitaxel for second-line or subsequent treatment of advanced ovarian cancer: a systematic review and economic evaluation.
By Main C, Bojke L, Griffin S, Norman G, Barbieri M, Mather L, *et al*.

No. 10
Evaluation of molecular techniques in prediction and diagnosis of cytomegalovirus disease in immunocompromised patients.
By Szczepura A, Westmoreland D, Vinogradova Y, Fox J, Clark M.

No. 11
Screening for thrombophilia in high-risk situations: systematic review and cost-effectiveness analysis. The Thrombosis: Risk and Economic Assessment of Thrombophilia Screening (TREATS) study.
By Wu O, Robertson L, Twaddle S, Lowe GDO, Clark P, Greaves M, *et al*.

No. 12
A series of systematic reviews to inform a decision analysis for sampling and treating infected diabetic foot ulcers.
By Nelson EA, O'Meara S, Craig D, Iglesias C, Golder S, Dalton J, *et al*.

No. 13
Randomised clinical trial, observational study and assessment of cost-effectiveness of the treatment of varicose veins (REACTIV trial).
By Michaels JA, Campbell WB, Brazier JE, MacIntyre JB, Palfreyman SJ, Ratcliffe J, *et al*.

No. 14
The cost-effectiveness of screening for oral cancer in primary care.
By Speight PM, Palmer S, Moles DR, Downer MC, Smith DH, Henriksson M, *et al*.

No. 15
Measurement of the clinical and cost-effectiveness of non-invasive diagnostic testing strategies for deep vein thrombosis.
By Goodacre S, Sampson F, Stevenson M, Wailoo A, Sutton A, Thomas S, *et al*.

No. 16
Systematic review of the effectiveness and cost-effectiveness of HealOzone® for the treatment of occlusal pit/fissure caries and root caries.
By Brazzelli M, McKenzie L, Fielding S, Fraser C, Clarkson J, Kilonzo M, *et al*.

No. 17
Randomised controlled trials of conventional antipsychotic versus new atypical drugs, and new atypical drugs versus clozapine, in people with schizophrenia responding poorly to, or intolerant of, current drug treatment.
By Lewis SW, Davies L, Jones PB, Barnes TRE, Murray RM, Kerwin R, *et al*.

No. 18
Diagnostic tests and algorithms used in the investigation of haematuria: systematic reviews and economic evaluation.
By Rodgers M, Nixon J, Hempel S, Aho T, Kelly J, Neal D, *et al*.

No. 19
Cognitive behavioural therapy in addition to antispasmodic therapy for irritable bowel syndrome in primary care: randomised controlled trial.
By Kennedy TM, Chalder T, McCrone P, Darnley S, Knapp M, Jones RH, *et al*.

No. 20
A systematic review of the clinical effectiveness and cost-effectiveness of enzyme replacement therapies for Fabry's disease and mucopolysaccharidosis type 1.
By Connock M, Juarez-Garcia A, Frew E, Mans A, Dretzke J, Fry-Smith A, *et al*.

No. 21
Health benefits of antiviral therapy for mild chronic hepatitis C: randomised controlled trial and economic evaluation.
By Wright M, Grieve R, Roberts J, Main J, Thomas HC, on behalf of the UK Mild Hepatitis C Trial Investigators.

No. 22
Pressure relieving support surfaces: a randomised evaluation.
By Nixon J, Nelson EA, Cranny G, Iglesias CP, Hawkins K, Cullum NA, *et al*.

No. 23
A systematic review and economic model of the effectiveness and cost-effectiveness of methylphenidate, dexamfetamine and atomoxetine for the treatment of attention deficit hyperactivity disorder in children and adolescents.
By King S, Griffin S, Hodges Z, Weatherly H, Asseburg C, Richardson G, *et al.*

No. 24
The clinical effectiveness and cost-effectiveness of enzyme replacement therapy for Gaucher's disease: a systematic review.
By Connock M, Burls A, Frew E, Fry-Smith A, Juarez-Garcia A, McCabe C, *et al*.

No. 25
Effectiveness and cost-effectiveness of salicylic acid and cryotherapy for cutaneous warts. An economic decision model.
By Thomas KS, Keogh-Brown MR, Chalmers JR, Fordham RJ, Holland RC, Armstrong SJ, *et al*.

No. 26
A systematic literature review of the effectiveness of non-pharmacological interventions to prevent wandering in dementia and evaluation of the ethical implications and acceptability of their use.
By Robinson L, Hutchings D, Corner L, Beyer F, Dickinson H, Vanoli A, *et al*.

No. 27
A review of the evidence on the effects and costs of implantable cardioverter defibrillator therapy in different patient groups, and modelling of cost-effectiveness and cost–utility for these groups in a UK context.
By Buxton M, Caine N, Chase D, Connelly D, Grace A, Jackson C, *et al*.

No. 28
Adefovir dipivoxil and pegylated interferon alfa-2a for the treatment of chronic hepatitis B: a systematic review and economic evaluation.
By Shepherd J, Jones J, Takeda A, Davidson P, Price A.

No. 29
An evaluation of the clinical and cost-effectiveness of pulmonary artery catheters in patient management in intensive care: a systematic review and a randomised controlled trial.
By Harvey S, Stevens K, Harrison D, Young D, Brampton W, McCabe C, *et al*.

No. 30
Accurate, practical and cost-effective assessment of carotid stenosis in the UK.
By Wardlaw JM, Chappell FM, Stevenson M, De Nigris E, Thomas S, Gillard J, *et al*.

No. 31
Etanercept and infliximab for the treatment of psoriatic arthritis: a systematic review and economic evaluation.
By Woolacott N, Bravo Vergel Y, Hawkins N, Kainth A, Khadjesari Z, Misso K, *et al*.

No. 32
The cost-effectiveness of testing for hepatitis C in former injecting drug users.
By Castelnuovo E, Thompson-Coon J, Pitt M, Cramp M, Siebert U, Price A, *et al*.

No. 33
Computerised cognitive behaviour therapy for depression and anxiety update: a systematic review and economic evaluation.
By Kaltenthaler E, Brazier J, De Nigris E, Tumur I, Ferriter M, Beverley C, *et al*.

No. 34
Cost-effectiveness of using prognostic information to select women with breast cancer for adjuvant systemic therapy.
By Williams C, Brunskill S, Altman D, Briggs A, Campbell H, Clarke M, *et al*.

No. 35
Psychological therapies including dialectical behaviour therapy for borderline personality disorder: a systematic review and preliminary economic evaluation.
By Brazier J, Tumur I, Holmes M, Ferriter M, Parry G, Dent-Brown K, *et al*.

No. 36
Clinical effectiveness and cost-effectiveness of tests for the diagnosis and investigation of urinary tract infection in children: a systematic review and economic model.
By Whiting P, Westwood M, Bojke L, Palmer S, Richardson G, Cooper J, *et al*.

No. 37
Cognitive behavioural therapy in chronic fatigue syndrome: a randomised controlled trial of an outpatient group programme.
By O'Dowd H, Gladwell P, Rogers CA, Hollinghurst S, Gregory A.

No. 38
A comparison of the cost-effectiveness of five strategies for the prevention of nonsteroidal anti-inflammatory drug-induced gastrointestinal toxicity: a systematic review with economic modelling.
By Brown TJ, Hooper L, Elliott RA, Payne K, Webb R, Roberts C, et al.

No. 39
The effectiveness and cost-effectiveness of computed tomography screening for coronary artery disease: systematic review.
By Waugh N, Black C, Walker S, McIntyre L, Cummins E, Hillis G.

No. 40
What are the clinical outcome and cost-effectiveness of endoscopy undertaken by nurses when compared with doctors? A Multi-Institution Nurse Endoscopy Trial (MINuET).
By Williams J, Russell I, Durai D, Cheung W-Y, Farrin A, Bloor K, *et al*.

No. 41
The clinical and cost-effectiveness of oxaliplatin and capecitabine for the adjuvant treatment of colon cancer: systematic review and economic evaluation.
By Pandor A, Eggington S, Paisley S, Tappenden P, Sutcliffe P.

No. 42
A systematic review of the effectiveness of adalimumab, etanercept and infliximab for the treatment of rheumatoid arthritis in adults and an economic evaluation of their cost-effectiveness.
By Chen Y-F, Jobanputra P, Barton P, Jowett S, Bryan S, Clark W, *et al*.

No. 43
Telemedicine in dermatology: a randomised controlled trial.
By Bowns IR, Collins K, Walters SJ, McDonagh AJG.

No. 44
Cost-effectiveness of cell salvage and alternative methods of minimising perioperative allogeneic blood transfusion: a systematic review and economic model.
By Davies L, Brown TJ, Haynes S, Payne K, Elliott RA, McCollum C.

No. 45
Clinical effectiveness and cost-effectiveness of laparoscopic surgery for colorectal cancer: systematic reviews and economic evaluation.
By Murray A, Lourenco T, de Verteuil R, Hernandez R, Fraser C, McKinley A, *et al*.

No. 46
Etanercept and efalizumab for the treatment of psoriasis: a systematic review.
By Woolacott N, Hawkins N, Mason A, Kainth A, Khadjesari Z, Bravo Vergel Y, *et al*.

No. 47
Systematic reviews of clinical decision tools for acute abdominal pain.
By Liu JLY, Wyatt JC, Deeks JJ, Clamp S, Keen J, Verde P, *et al*.

No. 48
Evaluation of the ventricular assist device programme in the UK.
By Sharples L, Buxton M, Caine N, Cafferty F, Demiris N, Dyer M, *et al*.

No. 49
A systematic review and economic model of the clinical and cost-effectiveness of immunosuppressive therapy for renal transplantation in children.
By Yao G, Albon E, Adi Y, Milford D, Bayliss S, Ready A, *et al*.

No. 50
Amniocentesis results: investigation of anxiety. The ARIA trial.
By Hewison J, Nixon J, Fountain J, Cocks K, Jones C, Mason G, *et al*.

Volume 11, 2007

No. 1
Pemetrexed disodium for the treatment of malignant pleural mesothelioma: a systematic review and economic evaluation.
By Dundar Y, Bagust A, Dickson R, Dodd S, Green J, Haycox A, *et al*.

No. 2
A systematic review and economic model of the clinical effectiveness and cost-effectiveness of docetaxel in combination with prednisone or prednisolone for the treatment of hormone-refractory metastatic prostate cancer.
By Collins R, Fenwick E, Trowman R, Perard R, Norman G, Light K, *et al*.

No. 3
A systematic review of rapid diagnostic tests for the detection of tuberculosis infection.
By Dinnes J, Deeks J, Kunst H, Gibson A, Cummins E, Waugh N, *et al*.

No. 4
The clinical effectiveness and cost-effectiveness of strontium ranelate for the prevention of osteoporotic fragility fractures in postmenopausal women.
By Stevenson M, Davis S, Lloyd-Jones M, Beverley C.

No. 5
A systematic review of quantitative and qualitative research on the role and effectiveness of written information available to patients about individual medicines.
By Raynor DK, Blenkinsopp A, Knapp P, Grime J, Nicolson DJ, Pollock K, *et al*.

No. 6
Oral naltrexone as a treatment for relapse prevention in formerly opioid-dependent drug users: a systematic review and economic evaluation.
By Adi Y, Juarez-Garcia A, Wang D, Jowett S, Frew E, Day E, *et al*.

No. 7
Glucocorticoid-induced osteoporosis: a systematic review and cost–utility analysis.
By Kanis JA, Stevenson M, McCloskey EV, Davis S, Lloyd-Jones M.

No. 8
Epidemiological, social, diagnostic and economic evaluation of population screening for genital chlamydial infection.
By Low N, McCarthy A, Macleod J, Salisbury C, Campbell R, Roberts TE, *et al*.

No. 9
Methadone and buprenorphine for the management of opioid dependence: a systematic review and economic evaluation.
By Connock M, Juarez-Garcia A, Jowett S, Frew E, Liu Z, Taylor RJ, *et al*.

No. 10
Exercise Evaluation Randomised Trial (EXERT): a randomised trial comparing GP referral for leisure centre-based exercise, community-based walking and advice only.
By Isaacs AJ, Critchley JA, See Tai S, Buckingham K, Westley D, Harridge SDR, *et al*.

No. 11
Interferon alfa (pegylated and non-pegylated) and ribavirin for the treatment of mild chronic hepatitis C: a systematic review and economic evaluation.
By Shepherd J, Jones J, Hartwell D, Davidson P, Price A, Waugh N.

No. 12
Systematic review and economic evaluation of bevacizumab and cetuximab for the treatment of metastatic colorectal cancer.
By Tappenden P, Jones R, Paisley S, Carroll C.

No. 13
A systematic review and economic evaluation of epoetin alfa, epoetin beta and darbepoetin alfa in anaemia associated with cancer, especially that attributable to cancer treatment.
By Wilson J, Yao GL, Raftery J, Bohlius J, Brunskill S, Sandercock J, *et al*.

No. 14
A systematic review and economic evaluation of statins for the prevention of coronary events.
By Ward S, Lloyd Jones M, Pandor A, Holmes M, Ara R, Ryan A, *et al*.

No. 15
A systematic review of the effectiveness and cost-effectiveness of different models of community-based respite care for frail older people and their carers.
By Mason A, Weatherly H, Spilsbury K, Arksey H, Golder S, Adamson J, *et al*.

No. 16
Additional therapy for young children with spastic cerebral palsy: a randomised controlled trial.
By Weindling AM, Cunningham CC, Glenn SM, Edwards RT, Reeves DJ.

No. 17
Screening for type 2 diabetes: literature review and economic modelling.
By Waugh N, Scotland G, McNamee P, Gillett M, Brennan A, Goyder E, *et al*.

No. 18
The effectiveness and cost-effectiveness of cinacalcet for secondary hyperparathyroidism in end-stage renal disease patients on dialysis: a systematic review and economic evaluation.
By Garside R, Pitt M, Anderson R, Mealing S, Roome C, Snaith A, *et al*.

No. 19
The clinical effectiveness and cost-effectiveness of gemcitabine for metastatic breast cancer: a systematic review and economic evaluation.
By Takeda AL, Jones J, Loveman E, Tan SC, Clegg AJ.

No. 20
A systematic review of duplex ultrasound, magnetic resonance angiography and computed tomography angiography for the diagnosis and assessment of symptomatic, lower limb peripheral arterial disease.
By Collins R, Cranny G, Burch J, Aguiar-Ibáñez R, Craig D, Wright K, *et al*.

No. 21
The clinical effectiveness and cost-effectiveness of treatments for children with idiopathic steroid-resistant nephrotic syndrome: a systematic review.
By Colquitt JL, Kirby J, Green C, Cooper K, Trompeter RS.

No. 22
A systematic review of the routine monitoring of growth in children of primary school age to identify growth-related conditions.
By Fayter D, Nixon J, Hartley S, Rithalia A, Butler G, Rudolf M, *et al*.

No. 23
Systematic review of the effectiveness of preventing and treating *Staphylococcus aureus* carriage in reducing peritoneal catheter-related infections.
By McCormack K, Rabindranath K, Kilonzo M, Vale L, Fraser C, McIntyre L, *et al*.

No. 24
The clinical effectiveness and cost of repetitive transcranial magnetic stimulation versus electroconvulsive therapy in severe depression: a multicentre pragmatic randomised controlled trial and economic analysis.
By McLoughlin DM, Mogg A, Eranti S, Pluck G, Purvis R, Edwards D, *et al*.

No. 25
A randomised controlled trial and economic evaluation of direct versus indirect and individual versus group modes of speech and language therapy for children with primary language impairment.
By Boyle J, McCartney E, Forbes J, O'Hare A.

No. 26
Hormonal therapies for early breast cancer: systematic review and economic evaluation.
By Hind D, Ward S, De Nigris E, Simpson E, Carroll C, Wyld L.

No. 27
Cardioprotection against the toxic effects of anthracyclines given to children with cancer: a systematic review.
By Bryant J, Picot J, Levitt G, Sullivan I, Baxter L, Clegg A.

No. 28
Adalimumab, etanercept and infliximab for the treatment of ankylosing spondylitis: a systematic review and economic evaluation.
By McLeod C, Bagust A, Boland A, Dagenais P, Dickson R, Dundar Y, *et al*.

No. 29
Prenatal screening and treatment strategies to prevent group B streptococcal and other bacterial infections in early infancy: cost-effectiveness and expected value of information analyses.
By Colbourn T, Asseburg C, Bojke L, Philips Z, Claxton K, Ades AE, *et al*.

No. 30
Clinical effectiveness and cost-effectiveness of bone morphogenetic proteins in the non-healing of fractures and spinal fusion: a systematic review.
By Garrison KR, Donell S, Ryder J, Shemilt I, Mugford M, Harvey I, *et al*.

No. 31
A randomised controlled trial of postoperative radiotherapy following breast-conserving surgery in a minimum-risk older population. The PRIME trial.
By Prescott RJ, Kunkler IH, Williams LJ, King CC, Jack W, van der Pol M, *et al*.

No. 32
Current practice, accuracy, effectiveness and cost-effectiveness of the school entry hearing screen.
By Bamford J, Fortnum H, Bristow K, Smith J, Vamvakas G, Davies L, *et al*.

No. 33
The clinical effectiveness and cost-effectiveness of inhaled insulin in diabetes mellitus: a systematic review and economic evaluation.
By Black C, Cummins E, Royle P, Philip S, Waugh N.

No. 34
Surveillance of cirrhosis for hepatocellular carcinoma: systematic review and economic analysis.
By Thompson Coon J, Rogers G, Hewson P, Wright D, Anderson R, Cramp M, *et al*.

No. 35
The Birmingham Rehabilitation Uptake Maximisation Study (BRUM). Homebased compared with hospital-based cardiac rehabilitation in a multi-ethnic population: cost-effectiveness and patient adherence.
By Jolly K, Taylor R, Lip GYH, Greenfield S, Raftery J, Mant J, *et al*.

No. 36
A systematic review of the clinical, public health and cost-effectiveness of rapid diagnostic tests for the detection and identification of bacterial intestinal pathogens in faeces and food.
By Abubakar I, Irvine L, Aldus CF, Wyatt GM, Fordham R, Schelenz S, *et al*.

No. 37
A randomised controlled trial examining the longer-term outcomes of standard versus new antiepileptic drugs. The SANAD trial.
By Marson AG, Appleton R, Baker GA, Chadwick DW, Doughty J, Eaton B, *et al*.

No. 38
Clinical effectiveness and cost-effectiveness of different models of managing long-term oral anti-coagulation therapy: a systematic review and economic modelling.
By Connock M, Stevens C, Fry-Smith A, Jowett S, Fitzmaurice D, Moore D, *et al*.

No. 39
A systematic review and economic model of the clinical effectiveness and cost-effectiveness of interventions for preventing relapse in people with bipolar disorder.
By Soares-Weiser K, Bravo Vergel Y, Beynon S, Dunn G, Barbieri M, Duffy S, *et al*.

No. 40
Taxanes for the adjuvant treatment of early breast cancer: systematic review and economic evaluation.
By Ward S, Simpson E, Davis S, Hind D, Rees A, Wilkinson A.

No. 41
The clinical effectiveness and cost-effectiveness of screening for open angle glaucoma: a systematic review and economic evaluation.
By Burr JM, Mowatt G, Hernández R, Siddiqui MAR, Cook J, Lourenco T, *et al*.

No. 42
Acceptability, benefit and costs of early screening for hearing disability: a study of potential screening tests and models.
By Davis A, Smith P, Ferguson M, Stephens D, Gianopoulos I.

No. 43
Contamination in trials of educational interventions.
By Keogh-Brown MR, Bachmann MO, Shepstone L, Hewitt C, Howe A, Ramsay CR, *et al*.

No. 44
Overview of the clinical effectiveness of positron emission tomography imaging in selected cancers.
By Facey K, Bradbury I, Laking G, Payne E.

No. 45
The effectiveness and cost-effectiveness of carmustine implants and temozolomide for the treatment of newly diagnosed high-grade glioma: a systematic review and economic evaluation.
By Garside R, Pitt M, Anderson R, Rogers G, Dyer M, Mealing S, *et al*.

No. 46
Drug-eluting stents: a systematic review and economic evaluation.
By Hill RA, Boland A, Dickson R, Dündar Y, Haycox A, McLeod C, *et al*.

No. 47
The clinical effectiveness and cost-effectiveness of cardiac resynchronisation (biventricular pacing) for heart failure: systematic review and economic model.
By Fox M, Mealing S, Anderson R, Dean J, Stein K, Price A, *et al*.

No. 48
Recruitment to randomised trials: strategies for trial enrolment and participation study. The STEPS study.
By Campbell MK, Snowdon C, Francis D, Elbourne D, McDonald AM, Knight R, *et al*.

No. 49
Cost-effectiveness of functional cardiac testing in the diagnosis and management of coronary artery disease: a randomised controlled trial. The CECaT trial.
By Sharples L, Hughes V, Crean A, Dyer M, Buxton M, Goldsmith K, *et al*.

No. 50
Evaluation of diagnostic tests when there is no gold standard. A review of methods.
By Rutjes AWS, Reitsma JB, Coomarasamy A, Khan KS, Bossuyt PMM.

No. 51
Systematic reviews of the clinical effectiveness and cost-effectiveness of proton pump inhibitors in acute upper gastrointestinal bleeding.
By Leontiadis GI, Sreedharan A, Dorward S, Barton P, Delaney B, Howden CW, *et al*.

No. 52
A review and critique of modelling in prioritising and designing screening programmes.
By Karnon J, Goyder E, Tappenden P, McPhie S, Towers I, Brazier J, *et al*.

No. 53
An assessment of the impact of the NHS Health Technology Assessment Programme.
By Hanney S, Buxton M, Green C, Coulson D, Raftery J.

Volume 12, 2008

No. 1
A systematic review and economic model of switching from nonglycopeptide to glycopeptide antibiotic prophylaxis for surgery.
By Cranny G, Elliott R, Weatherly H, Chambers D, Hawkins N, Myers L, *et al*.

No. 2
'Cut down to quit' with nicotine replacement therapies in smoking cessation: a systematic review of effectiveness and economic analysis.
By Wang D, Connock M, Barton P, Fry-Smith A, Aveyard P, Moore D.

No. 3
A systematic review of the effectiveness of strategies for reducing fracture risk in children with juvenile idiopathic arthritis with additional data on long-term risk of fracture and cost of disease management.
By Thornton J, Ashcroft D, O'Neill T, Elliott R, Adams J, Roberts C, *et al*.

No. 4
Does befriending by trained lay workers improve psychological well-being and quality of life for carers of people with dementia, and at what cost? A randomised controlled trial.
By Charlesworth G, Shepstone L, Wilson E, Thalanany M, Mugford M, Poland F.

No. 5
A multi-centre retrospective cohort study comparing the efficacy, safety and cost-effectiveness of hysterectomy and uterine artery embolisation for the treatment of symptomatic uterine fibroids. The HOPEFUL study.
By Hirst A, Dutton S, Wu O, Briggs A, Edwards C, Waldenmaier L, *et al*.

No. 6
Methods of prediction and prevention of pre-eclampsia: systematic reviews of accuracy and effectiveness literature with economic modelling.
By Meads CA, Cnossen JS, Meher S, Juarez-Garcia A, ter Riet G, Duley L, *et al*.

No. 7
The use of economic evaluations in NHS decision-making: a review and empirical investigation.
By Williams I, McIver S, Moore D, Bryan S.

No. 8
Stapled haemorrhoidectomy (haemorrhoidopexy) for the treatment of haemorrhoids: a systematic review and economic evaluation.
By Burch J, Epstein D, Baba-Akbari A, Weatherly H, Fox D, Golder S, *et al*.

No. 9
The clinical effectiveness of diabetes education models for Type 2 diabetes: a systematic review.
By Loveman E, Frampton GK, Clegg AJ.

No. 10
Payment to healthcare professionals for patient recruitment to trials: systematic review and qualitative study.
By Raftery J, Bryant J, Powell J, Kerr C, Hawker S.

No. 11
Cyclooxygenase-2 selective non-steroidal anti-inflammatory drugs (etodolac, meloxicam, celecoxib, rofecoxib, etoricoxib, valdecoxib and lumiracoxib) for osteoarthritis and rheumatoid arthritis: a systematic review and economic evaluation.
By Chen Y-F, Jobanputra P, Barton P, Bryan S, Fry-Smith A, Harris G, *et al*.

No. 12
The clinical effectiveness and cost-effectiveness of central venous catheters treated with anti-infective agents in preventing bloodstream infections: a systematic review and economic evaluation.
By Hockenhull JC, Dwan K, Boland A, Smith G, Bagust A, Dundar Y, *et al*.

No. 13
Stepped treatment of older adults on laxatives. The STOOL trial.
By Mihaylov S, Stark C, McColl E, Steen N, Vanoli A, Rubin G, *et al*.

No. 14
A randomised controlled trial of cognitive behaviour therapy in adolescents with major depression treated by selective serotonin reuptake inhibitors. The ADAPT trial.
By Goodyer IM, Dubicka B, Wilkinson P, Kelvin R, Roberts C, Byford S, *et al*.

No. 15
The use of irinotecan, oxaliplatin and raltitrexed for the treatment of advanced colorectal cancer: systematic review and economic evaluation.
By Hind D, Tappenden P, Tumur I, Eggington E, Sutcliffe P, Ryan A.

No. 16
Ranibizumab and pegaptanib for the treatment of age-related macular degeneration: a systematic review and economic evaluation.
By Colquitt JL, Jones J, Tan SC, Takeda A, Clegg AJ, Price A.

No. 17
Systematic review of the clinical effectiveness and cost-effectiveness of 64-slice or higher computed tomography angiography as an alternative to invasive coronary angiography in the investigation of coronary artery disease.
By Mowatt G, Cummins E, Waugh N, Walker S, Cook J, Jia X, *et al*.

No. 18
Structural neuroimaging in psychosis: a systematic review and economic evaluation.
By Albon E, Tsourapas A, Frew E, Davenport C, Oyebode F, Bayliss S, *et al*.

No. 19
Systematic review and economic analysis of the comparative effectiveness of different inhaled corticosteroids and their usage with long-acting beta$_2$ agonists for the treatment of chronic asthma in adults and children aged 12 years and over.
By Shepherd J, Rogers G, Anderson R, Main C, Thompson-Coon J, Hartwell D, *et al*.

No. 20
Systematic review and economic analysis of the comparative effectiveness of different inhaled corticosteroids and their usage with long-acting beta$_2$ agonists for the treatment of chronic asthma in children under the age of 12 years.
By Main C, Shepherd J, Anderson R, Rogers G, Thompson-Coon J, Liu Z, *et al*.

No. 21
Ezetimibe for the treatment of hypercholesterolaemia: a systematic review and economic evaluation.
By Ara R, Tumur I, Pandor A, Duenas A, Williams R, Wilkinson A, *et al*.

No. 22
Topical or oral ibuprofen for chronic knee pain in older people. The TOIB study.
By Underwood M, Ashby D, Carnes D, Castelnuovo E, Cross P, Harding G, *et al*.

No. 23
A prospective randomised comparison of minor surgery in primary and secondary care. The MiSTIC trial.
By George S, Pockney P, Primrose J, Smith H, Little P, Kinley H, *et al*.

No. 24
A review and critical appraisal of measures of therapist–patient interactions in mental health settings.
By Cahill J, Barkham M, Hardy G, Gilbody S, Richards D, Bower P, *et al*.

No. 25
The clinical effectiveness and cost-effectiveness of screening programmes for amblyopia and strabismus in children up to the age of 4–5 years: a systematic review and economic evaluation.
By Carlton J, Karnon J, Czoski-Murray C, Smith KJ, Marr J.

No. 26
A systematic review of the clinical effectiveness and cost-effectiveness and economic modelling of minimal incision total hip replacement approaches in the management of arthritic disease of the hip.
By de Verteuil R, Imamura M, Zhu S, Glazener C, Fraser C, Munro N, *et al*.

No. 27
A preliminary model-based assessment of the cost–utility of a screening programme for early age-related macular degeneration.
By Karnon J, Czoski-Murray C, Smith K, Brand C, Chakravarthy U, Davis S, *et al*.

No. 28
Intravenous magnesium sulphate and sotalol for prevention of atrial fibrillation after coronary artery bypass surgery: a systematic review and economic evaluation.
By Shepherd J, Jones J, Frampton GK, Tanajewski L, Turner D, Price A.

No. 29
Absorbent products for urinary/faecal incontinence: a comparative evaluation of key product categories.
By Fader M, Cottenden A, Getliffe K, Gage H, Clarke-O'Neill S, Jamieson K, *et al*.

No. 30
A systematic review of repetitive functional task practice with modelling of resource use, costs and effectiveness.
By French B, Leathley M, Sutton C, McAdam J, Thomas L, Forster A, *et al*.

No. 31
The effectiveness and cost-effectivness of minimal access surgery amongst people with gastro-oesophageal reflux disease – a UK collaborative study. The REFLUX trial.
By Grant A, Wileman S, Ramsay C, Bojke L, Epstein D, Sculpher M, *et al.*

No. 32
Time to full publication of studies of anti-cancer medicines for breast cancer and the potential for publication bias: a short systematic review.
By Takeda A, Loveman E, Harris P, Hartwell D, Welch K.

No. 33
Performance of screening tests for child physical abuse in accident and emergency departments.
By Woodman J, Pitt M, Wentz R, Taylor B, Hodes D, Gilbert RE.

No. 34
Curative catheter ablation in atrial fibrillation and typical atrial flutter: systematic review and economic evaluation.
By Rodgers M, McKenna C, Palmer S, Chambers D, Van Hout S, Golder S, *et al.*

No. 35
Systematic review and economic modelling of effectiveness and cost utility of surgical treatments for men with benign prostatic enlargement.
By Lourenco T, Armstrong N, N'Dow J, Nabi G, Deverill M, Pickard R, *et al.*

No. 36
Immunoprophylaxis against respiratory syncytial virus (RSV) with palivizumab in children: a systematic review and economic evaluation.
By Wang D, Cummins C, Bayliss S, Sandercock J, Burls A.

Volume 13, 2009

No. 1
Deferasirox for the treatment of iron overload associated with regular blood transfusions (transfusional haemosiderosis) in patients suffering with chronic anaemia: a systematic review and economic evaluation.
By McLeod C, Fleeman N, Kirkham J, Bagust A, Boland A, Chu P, *et al.*

No. 2
Thrombophilia testing in people with venous thromboembolism: systematic review and cost-effectiveness analysis.
By Simpson EL, Stevenson MD, Rawdin A, Papaioannou D.

No. 3
Surgical procedures and non-surgical devices for the management of non-apnoeic snoring: a systematic review of clinical effects and associated treatment costs.
By Main C, Liu Z, Welch K, Weiner G, Quentin Jones S, Stein K.

No. 4
Continuous positive airway pressure devices for the treatment of obstructive sleep apnoea–hypopnoea syndrome: a systematic review and economic analysis.
By McDaid C, Griffin S, Weatherly H, Durée K, van der Burgt M, van Hout S, Akers J, *et al.*

No. 5
Use of classical and novel biomarkers as prognostic risk factors for localised prostate cancer: a systematic review.
By Sutcliffe P, Hummel S, Simpson E, Young T, Rees A, Wilkinson A, *et al.*

No. 6
The harmful health effects of recreational ecstasy: a systematic review of observational evidence.
By Rogers G, Elston J, Garside R, Roome C, Taylor R, Younger P, *et al.*

No. 7
Systematic review of the clinical effectiveness and cost-effectiveness of oesophageal Doppler monitoring in critically ill and high-risk surgical patients.
By Mowatt G, Houston G, Hernández R, de Verteuil R, Fraser C, Cuthbertson B, *et al.*

No. 8
The use of surrogate outcomes in model-based cost-effectiveness analyses: a survey of UK Health Technology Assessment reports.
By Taylor RS, Elston J.

No. 9
Controlling Hypertension and Hypotension Immediately Post Stroke (CHHIPS) – a randomised controlled trial.
By Potter J, Mistri A, Brodie F, Chernova J, Wilson E, Jagger C, *et al.*

No. 10
Routine antenatal anti-D prophylaxis for RhD-negative women: a systematic review and economic evaluation.
By Pilgrim H, Lloyd-Jones M, Rees A.

No. 11
Amantadine, oseltamivir and zanamivir for the prophylaxis of influenza (including a review of existing guidance no. 67): a systematic review and economic evaluation.
By Tappenden P, Jackson R, Cooper K, Rees A, Simpson E, Read R, *et al.*

No. 12
Improving the evaluation of therapeutic interventions in multiple sclerosis: the role of new psychometric methods.
By Hobart J, Cano S.

No. 13
Treatment of severe ankle sprain: a pragmatic randomised controlled trial comparing the clinical effectiveness and cost-effectiveness of three types of mechanical ankle support with tubular bandage. The CAST trial.
By Cooke MW, Marsh JL, Clark M, Nakash R, Jarvis RM, Hutton JL, *et al.*, on behalf of the CAST trial group.

No. 14
Non-occupational postexposure prophylaxis for HIV: a systematic review.
By Bryant J, Baxter L, Hird S.

No. 15
Blood glucose self-monitoring in type 2 diabetes: a randomised controlled trial.
By Farmer AJ, Wade AN, French DP, Simon J, Yudkin P, Gray A, *et al.*

No. 16
How far does screening women for domestic (partner) violence in different health-care settings meet criteria for a screening programme? Systematic reviews of nine UK National Screening Committee criteria.
By Feder G, Ramsay J, Dunne D, Rose M, Arsene C, Norman R, *et al.*

No. 17
Spinal cord stimulation for chronic pain of neuropathic or ischaemic origin: systematic review and economic evaluation.
By Simpson, EL, Duenas A, Holmes MW, Papaioannou D, Chilcott J.

No. 18
The role of magnetic resonance imaging in the identification of suspected acoustic neuroma: a systematic review of clinical and cost-effectiveness and natural history.
By Fortnum H, O'Neill C, Taylor R, Lenthall R, Nikolopoulos T, Lightfoot G, *et al.*

No. 19
Dipsticks and diagnostic algorithms in urinary tract infection: development and validation, randomised trial, economic analysis, observational cohort and qualitative study.
By Little P, Turner S, Rumsby K, Warner G, Moore M, Lowes JA, *et al.*

No. 20
Systematic review of respite care in the frail elderly.
By Shaw C, McNamara R, Abrams K, Cannings-John R, Hood K, Longo M, *et al.*

No. 21
Neuroleptics in the treatment of aggressive challenging behaviour for people with intellectual disabilities: a randomised controlled trial (NACHBID).
By Tyrer P, Oliver-Africano P, Romeo R, Knapp M, Dickens S, Bouras N, *et al.*

No. 22
Randomised controlled trial to determine the clinical effectiveness and cost-effectiveness of selective serotonin reuptake inhibitors plus supportive care, versus supportive care alone, for mild to moderate depression with somatic symptoms in primary care: the THREAD (THREshold for AntiDepressant response) study.
By Kendrick T, Chatwin J, Dowrick C, Tylee A, Morriss R, Peveler R, *et al.*

No. 23
Diagnostic strategies using DNA testing for hereditary haemochromatosis in at-risk populations: a systematic review and economic evaluation.
By Bryant J, Cooper K, Picot J, Clegg A, Roderick P, Rosenberg W, *et al.*

No. 24
Enhanced external counterpulsation for the treatment of stable angina and heart failure: a systematic review and economic analysis.
By McKenna C, McDaid C, Suekarran S, Hawkins N, Claxton K, Light K, *et al.*

No. 25
Development of a decision support tool for primary care management of patients with abnormal liver function tests without clinically apparent liver disease: a record-linkage population cohort study and decision analysis (ALFIE).
By Donnan PT, McLernon D, Dillon JF, Ryder S, Roderick P, Sullivan F, *et al.*

No. 26
A systematic review of presumed consent systems for deceased organ donation.
By Rithalia A, McDaid C, Suekarran S, Norman G, Myers L, Sowden A.

No. 27
Paracetamol and ibuprofen for the treatment of fever in children: the PITCH randomised controlled trial.
By Hay AD, Redmond NM, Costelloe C, Montgomery AA, Fletcher M, Hollinghurst S, *et al.*

No. 28
A randomised controlled trial to compare minimally invasive glucose monitoring devices with conventional monitoring in the management of insulin-treated diabetes mellitus (MITRE).
By Newman SP, Cooke D, Casbard A, Walker S, Meredith S, Nunn A, *et al.*

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Sensitivity analysis in economic evaluation: an audit of NICE current practice and a review of its use and value in decision-making.
By Andronis L, Barton P, Bryan S.

Suppl. 1
Trastuzumab for the treatment of primary breast cancer in HER2-positive women: a single technology appraisal.
By Ward S, Pilgrim H, Hind D.

Docetaxel for the adjuvant treatment of early node-positive breast cancer: a single technology appraisal.
By Chilcott J, Lloyd Jones M, Wilkinson A.

The use of paclitaxel in the management of early stage breast cancer.
By Griffin S, Dunn G, Palmer S, Macfarlane K, Brent S, Dyker A, *et al.*

Rituximab for the first-line treatment of stage III/IV follicular non-Hodgkin's lymphoma.
By Dundar Y, Bagust A, Hounsome J, McLeod C, Boland A, Davis H, *et al.*

Bortezomib for the treatment of multiple myeloma patients.
By Green C, Bryant J, Takeda A, Cooper K, Clegg A, Smith A, *et al.*

Fludarabine phosphate for the first-line treatment of chronic lymphocytic leukaemia.
By Walker S, Palmer S, Erhorn S, Brent S, Dyker A, Ferrie L, *et al.*

Erlotinib for the treatment of relapsed non-small cell lung cancer.
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By Griffin S, Walker S, Sculpher M, White S, Erhorn S, Brent S, *et al.*

Infliximab for the treatment of adults with psoriasis.
By Loveman E, Turner D, Hartwell D, Cooper K, Clegg A.

No. 30
Psychological interventions for postnatal depression: cluster randomised trial and economic evaluation. The PoNDER trial.
By Morrell CJ, Warner R, Slade P, Dixon S, Walters S, Paley G, *et al.*

No. 31
The effect of different treatment durations of clopidogrel in patients with non-ST-segment elevation acute coronary syndromes: a systematic review and value of information analysis.
By Rogowski R, Burch J, Palmer S, Craigs C, Golder S, Woolacott N.

No. 32
Systematic review and individual patient data meta-analysis of diagnosis of heart failure, with modelling of implications of different diagnostic strategies in primary care.
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No. 33
A multicentre randomised controlled trial of the use of continuous positive airway pressure and non-invasive positive pressure ventilation in the early treatment of patients presenting to the emergency department with severe acute cardiogenic pulmonary oedema: the 3CPO trial.
By Gray AJ, Goodacre S, Newby DE, Masson MA, Sampson F, Dixon S, *et al.*, on behalf of the 3CPO study investigators.

No. 34
Early high-dose lipid-lowering therapy to avoid cardiac events: a systematic review and economic evaluation.
By Ara R, Pandor A, Stevens J, Rees A, Rafia R.

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Adefovir dipivoxil and pegylated interferon alpha for the treatment of chronic hepatitis B: an updated systematic review and economic evaluation.
By Jones J, Shepherd J, Baxter L, Gospodarevskaya E, Hartwell D, Harris P, *et al.*

No. 36
Methods to identify postnatal depression in primary care: an integrated evidence synthesis and value of information analysis.
By Hewitt CE, Gilbody SM, Brealey S, Paulden M, Palmer S, Mann R, *et al.*

No. 37
A double-blind randomised placebo-controlled trial of topical intranasal corticosteroids in 4- to 11-year-old children with persistent bilateral otitis media with effusion in primary care.
By Williamson I, Benge S, Barton S, Petrou S, Letley L, Fasey N, *et al.*

No. 38
The effectiveness and cost-effectiveness of methods of storing donated kidneys from deceased donors: a systematic review and economic model.
By Bond M, Pitt M, Akoh J, Moxham T, Hoyle M, Anderson R.

No. 39
Rehabilitation of older patients: day hospital compared with rehabilitation at home. A randomised controlled trial.
By Parker SG, Oliver P, Pennington M, Bond J, Jagger C, Enderby PM, *et al.*

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Breastfeeding promotion for infants in neonatal units: a systematic review and economic analysis
By Renfrew MJ, Craig D, Dyson L, McCormick F, Rice S, King SE, *et al.*

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The clinical effectiveness and cost-effectiveness of bariatric (weight loss) surgery for obesity: a systematic review and economic evaluation.
By Picot J, Jones J, Colquitt JL, Gospodarevskaya E, Loveman E, Baxter L, *et al.*

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Rapid testing for group B streptococcus during labour: a test accuracy study with evaluation of acceptability and cost-effectiveness.
By Daniels J, Gray J, Pattison H, Roberts T, Edwards E, Milner P, *et al.*

No. 43
Screening to prevent spontaneous preterm birth: systematic reviews of accuracy and effectiveness literature with economic modelling.
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The effectiveness and cost-effectiveness of cochlear implants for severe to profound deafness in children and adults: a systematic review and economic model.
By Bond M, Mealing S, Anderson R, Elston J, Weiner G, Taylor RS, *et al.*

Suppl. 2
Gemcitabine for the treatment of metastatic breast cancer.
By Jones J, Takeda A, Tan SC, Cooper K, Loveman E, Clegg A.

Varenicline in the management of smoking cessation: a single technology appraisal.
By Hind D, Tappenden P, Peters J, Kenjegalieva K.

Alteplase for the treatment of acute ischaemic stroke: a single technology appraisal.
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Rituximab for the treatment of rheumatoid arthritis.
By Bagust A, Boland A, Hockenhull J, Fleeman N, Greenhalgh J, Dundar Y, *et al.*

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Adalimumab for the treatment of psoriasis.
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Dabigatran etexilate for the prevention of venous thromboembolism in patients undergoing elective hip and knee surgery: a single technology appraisal.
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Romiplostim for the treatment of chronic immune or idiopathic thrombocytopenic purpura: a single technology appraisal.
By Mowatt G, Boachie C, Crowther M, Fraser C, Hernández R, Jia X, *et al.*

Sunitinib for the treatment of gastrointestinal stromal tumours: a critique of the submission from Pfizer.
By Bond M, Hoyle M, Moxham T, Napier M, Anderson R.

No. 45
Vitamin K to prevent fractures in older women: systematic review and economic evaluation.
By Stevenson M, Lloyd-Jones M, Papaioannou D.

No. 46
The effects of biofeedback for the treatment of essential hypertension: a systematic review.
By Greenhalgh J, Dickson R, Dundar Y.

No. 47
A randomised controlled trial of the use of aciclovir and/or prednisolone for the early treatment of Bell's palsy: the BELLS study.
By Sullivan FM, Swan IRC, Donnan PT, Morrison JM, Smith BH, McKinstry B, *et al.*

Suppl. 3
Lapatinib for the treatment of HER2-overexpressing breast cancer.
By Jones J, Takeda A, Picot J, von Keyserlingk C, Clegg A.

Infliximab for the treatment of ulcerative colitis.
By Hyde C, Bryan S, Juarez-Garcia A, Andronis L, Fry-Smith A.

Rimonabant for the treatment of overweight and obese people.
By Burch J, McKenna C, Palmer S, Norman G, Glanville J, Sculpher M, *et al.*

Telbivudine for the treatment of chronic hepatitis B infection.
By Hartwell D, Jones J, Harris P, Cooper K.

Entecavir for the treatment of chronic hepatitis B infection.
By Shepherd J, Gospodarevskaya E, Frampton G, Cooper, K.

Febuxostat for the treatment of hyperuricaemia in people with gout: a single technology appraisal.
By Stevenson M, Pandor A.

Rivaroxaban for the prevention of venous thromboembolism: a single technology appraisal.
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Cetuximab for the treatment of recurrent and/or metastatic squamous cell carcinoma of the head and neck.
By Greenhalgh J, Bagust A, Boland A, Fleeman N, McLeod C, Dundar Y, *et al.*

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By Gospodarevskaya E, Picot J, Cooper K, Loveman E, Takeda A.

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Endovascular stents for abdominal aortic aneurysms: a systematic review and economic model.
By Chambers D, Epstein D, Walker S, Fayter D, Paton F, Wright K, *et al.*

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Clinical and cost-effectiveness of epoprostenol, iloprost, bosentan, sitaxentan and sildenafil for pulmonary arterial hypertension within their licensed indications: a systematic review and economic evaluation.
By Chen Y-F, Jowett S, Barton P, Malottki K, Hyde C, Gibbs JSR, *et al.*

No. 50
Cessation of attention deficit hyperactivity disorder drugs in the young (CADDY) – a pharmacoepidemiological and qualitative study.
By Wong ICK, Asherson P, Bilbow A, Clifford S, Coghill D, R DeSoysa R, *et al.*

No. 51
ARTISTIC: a randomised trial of human papillomavirus (HPV) testing in primary cervical screening.
By Kitchener HC, Almonte M, Gilham C, Dowie R, Stoykova B, Sargent A, *et al.*

No. 52
The clinical effectiveness of glucosamine and chondroitin supplements in slowing or arresting progression of osteoarthritis of the knee: a systematic review and economic evaluation.
By Black C, Clar C, Henderson R, MacEachern C, McNamee P, Quayyum Z, *et al.*

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Randomised preference trial of medical versus surgical termination of pregnancy less than 14 weeks' gestation (TOPS).
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Randomised controlled trial of the use of three dressing preparations in the management of chronic ulceration of the foot in diabetes.
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VenUS II: a randomised controlled trial of larval therapy in the management of leg ulcers.
By Dumville JC, Worthy G, Soares MO, Bland JM, Cullum N, Dowson C, *et al.*

No. 56
A prospective randomised controlled trial and economic modelling of antimicrobial silver dressings versus non-adherent control dressings for venous leg ulcers: the VULCAN trial
By Michaels JA, Campbell WB, King BM, MacIntyre J, Palfreyman SJ, Shackley P, *et al.*

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Communication of carrier status information following universal newborn screening for sickle cell disorders and cystic fibrosis: qualitative study of experience and practice.
By Kai J, Ulph F, Cullinan T, Qureshi N.

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Antiviral drugs for the treatment of influenza: a systematic review and economic evaluation.
By Burch J, Paulden M, Conti S, Stock C, Corbett M, Welton NJ, *et al.*

No. 59
Development of a toolkit and glossary to aid in the adaptation of health technology assessment (HTA) reports for use in different contexts.
By Chase D, Rosten C, Turner S, Hicks N, Milne R.

No. 60
Colour vision testing for diabetic retinopathy: a systematic review of diagnostic accuracy and economic evaluation.
By Rodgers M, Hodges R, Hawkins J, Hollingworth W, Duffy S, McKibbin M, *et al.*

No. 61
Systematic review of the effectiveness and cost-effectiveness of weight management schemes for the under fives: a short report.
By Bond M, Wyatt K, Lloyd J, Welch K, Taylor R.

No. 62
Are adverse effects incorporated in economic models? An initial review of current practice.
By Craig D, McDaid C, Fonseca T, Stock C, Duffy S, Woolacott N.

Volume 14, 2010

No. 1
Multicentre randomised controlled trial examining the cost-effectiveness of contrast-enhanced high field magnetic resonance imaging in women with primary breast cancer scheduled for wide local excision (COMICE).
By Turnbull LW, Brown SR, Olivier C, Harvey I, Brown J, Drew P, *et al.*

No. 2
Bevacizumab, sorafenib tosylate, sunitinib and temsirolimus for renal cell carcinoma: a systematic review and economic evaluation.
By Thompson Coon J, Hoyle M, Green C, Liu Z, Welch K, Moxham T, *et al.*

No. 3
The clinical effectiveness and cost-effectiveness of testing for cytochrome P450 polymorphisms in patients with schizophrenia treated with antipsychotics: a systematic review and economic evaluation.
By Fleeman N, McLeod C, Bagust A, Beale S, Boland A, Dundar Y, *et al.*

No. 4
Systematic review of the clinical effectiveness and cost-effectiveness of photodynamic diagnosis and urine biomarkers (FISH, ImmunoCyt, NMP22) and cytology for the detection and follow-up of bladder cancer.
By Mowatt G, Zhu S, Kilonzo M, Boachie C, Fraser C, Griffiths TRL, *et al.*

No. 5
Effectiveness and cost-effectiveness of arthroscopic lavage in the treatment of osteoarthritis of the knee: a mixed methods study of the feasibility of conducting a surgical placebo-controlled trial (the KORAL study).
By Campbell MK, Skea ZC, Sutherland AG, Cuthbertson BH, Entwistle VA, McDonald AM, *et al.*

No. 6
A randomised 2 × 2 trial of community versus hospital pulmonary rehabilitation for chronic obstructive pulmonary disease followed by telephone or conventional follow-up.
By Waterhouse JC, Walters SJ, Oluboyede Y, Lawson RA.

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The effectiveness and cost-effectiveness of behavioural interventions for the prevention of sexually transmitted infections in young people aged 13–19: a systematic review and economic evaluation.
By Shepherd J, Kavanagh J, Picot J, Cooper K, Harden A, Barnett-Page E, *et al.*

No. 8
Dissemination and publication of research findings: an updated review of related biases.
By Song F, Parekh S, Hooper L, Loke YK, Ryder J, Sutton AJ, *et al.*

No. 9
The effectiveness and cost-effectiveness of biomarkers for the prioritisation of patients awaiting coronary revascularisation: a systematic review and decision model.
By Hemingway H, Henriksson M, Chen R, Damant J, Fitzpatrick N, Abrams K, *et al.*

No. 10
Comparison of case note review methods for evaluating quality and safety in health care.
By Hutchinson A, Coster JE, Cooper KL, McIntosh A, Walters SJ, Bath PA, *et al.*

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Clinical effectiveness and cost-effectiveness of continuous subcutaneous insulin infusion for diabetes: systematic review and economic evaluation.
By Cummins E, Royle P, Snaith A, Greene A, Robertson L, McIntyre L, *et al.*

No. 12
Self-monitoring of blood glucose in type 2 diabetes: systematic review.
By Clar C, Barnard K, Cummins E, Royle P, Waugh N.

No. 13
North of England and Scotland Study of Tonsillectomy and Adeno-tonsillectomy in Children (NESSTAC): a pragmatic randomised controlled trial with a parallel non-randomised preference study.
By Lock C, Wilson J, Steen N, Eccles M, Mason H, Carrie S, *et al.*

No. 14
Multicentre randomised controlled trial of the clinical and cost-effectiveness of a bypass-surgery-first versus a balloon-angioplasty-first revascularisation strategy for severe limb ischaemia due to infrainguinal disease. The Bypass versus Angioplasty in Severe Ischaemia of the Leg (BASIL) trial.
By Bradbury AW, Adam DJ, Bell J, Forbes JF, Fowkes FGR, Gillespie I, *et al.*

No. 15
A randomised controlled multicentre trial of treatments for adolescent anorexia nervosa including assessment of cost-effectiveness and patient acceptability – the TOuCAN trial.
By Gowers SG, Clark AF, Roberts C, Byford S, Barrett B, Griffiths A, *et al.*

No. 16
Randomised controlled trials for policy interventions: a review of reviews and meta-regression.
By Oliver S, Bagnall AM, Thomas J, Shepherd J, Sowden A, White I, *et al.*

No. 17
Paracetamol and selective and non-selective non-steroidal anti-inflammatory drugs (NSAIDs) for the reduction of morphine-related side effects after major surgery: a systematic review.
By McDaid C, Maund E, Rice S, Wright K, Jenkins B, Woolacott N.

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Feedback

The HTA programme and the authors would like to know your views about this report.

The Correspondence Page on the HTA website (www.hta.ac.uk) is a convenient way to publish your comments. If you prefer, you can send your comments to the address below, telling us whether you would like us to transfer them to the website.

We look forward to hearing from you.

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ISSN 1366-5278