CRD summary
This review concluded that there were few differences in opioid treatment outcomes for those with or without co-morbid antisocial personality disorder. However, some treatment outcomes, such as cocaine use and criminal activity, did differ between groups. In view of the methodological limitations of the review, these conclusions should be interpreted with caution.

Authors' objectives
To examine differences in opiate treatment outcomes among users with and without co-morbid antisocial personality disorder (ASPD), to determine if subgroups of opiate users with ASPD respond differently to drug treatment.

Searching
MEDLINE (1968 to July 2003) and PsycINFO were searched; the search terms were reported. Only papers written in English were eligible for inclusion. The bibliographies of papers were also screened.

Study selection
Study designs of evaluations included in the review
Inclusion criteria were not specified in terms of the study design.

Specific interventions included in the review
Inclusion criteria were not specified in terms of the interventions, but it was clear that studies of treatment for opiate users with or without co-morbid ASPD were eligible for inclusion. The interventions in the review included: methadone maintenance (MM) alone or with various combinations of behavioural intervention, psychotherapy and drug counselling; amantadine versus desipramine versus placebo for cocaine dependence within MM; desipramine (DMI) compared with placebo for cocaine dependence within MM; in-patient detox programme; naltrexone as out-patient; 4 or 12 mg buprenorphine or 20 or 65 mg MM; clonazepam detoxification (CDTX) or clonazepam maintenance (CMT) within MM.

Participants included in the review
Studies of participants who were being treated for opioid dependency and were assessed for co-morbid ASPD were eligible for inclusion. The studies included in the review reported a prevalence of ASPD within the study populations ranging from 20.2 to 100%.

Outcomes assessed in the review
Studies that reported treatment outcomes by ASPD diagnosis were eligible for inclusion. A wide range of diagnostic criteria were used, including the American Psychiatric Association's DSM-III criteria and SADS.

How were decisions on the relevance of primary studies made?
The authors did not state how the papers were selected for the review, or how many reviewers performed the selection.

Assessment of study quality
The authors did not state that they assessed validity.

Data extraction
The authors did not state how the data were extracted for the review, or how many reviewers performed the data extraction.

Methods of synthesis
How were the studies combined?
The studies were combined in a narrative. Each study was described in the text and additional descriptive information
was tabulated.

How were differences between studies investigated?
Differences between the studies were apparent from inspection of the tables. Additional differences were discussed in the text.

Results of the review

Twenty-two studies were included in the review. The total number of participants included in the review was not stated. The number of participants in each study ranged from 40 to 1,011. Seven studies were randomised controlled trials (RCTs), two were cross-sectional, and thirteen were prospective or retrospective observational study designs. The 22 papers represent 9 cohorts and several papers that reported on the same cohort.

Few differences were observed for those with and without ASPD, receiving treatment for opioid dependence, with respect to retention, reduction in human immunodeficiency virus (HIV) risk behaviours and drug use. The results were also consistent across treatment modalities.

RCTs.

Two studies assessing psychotherapy found improvements in the Addiction Severity Index (ASI) score (p<0.05). One study found that participants with ASPD had improved scores in employment, as well as a reduction in drug use. A second study found that participants with ASPD alone showed little improvement in outcomes, whereas those with ASPD and depression experienced improvements in the composite scores for psychiatric, legal, drug use and employment sections of the ASI. One study assessing behavioural therapy found that participants with ASPD had a reduction in the ASI for drug use (p<0.05).

One study comparing DMI with amantadine and placebo found that participants with ASPD had lower retention, less cocaine-free urine samples and no response to amantadine DMI compared to those without ASPD (p<0.05). One study of participants with ASPD found no improvements in ASI scores for DMI, although DMI was effective in the group who did not have ASPD (p<0.05). A third study found no differences between participants with ASPD and those without for retention, positive opioid or cocaine urine samples, and abstinence from opioids or cocaine.

One study comparing CDTX or CMT with MM found that participants with ASPD were more likely to continue using benzodiazepines above the maintenance dose in the CMT group (p<0.05), but there were no differences in the CDTX group.

Observational studies.

Two studies among methadone users with and without ASPD found no differences in respect to retention, methadone doses or needle-sharing. However, one study found significant reductions (p<0.001) in needle and risk behaviours among opiate users on MM treatment.

In one study of participants undergoing MM, all measures of antisociality were associated with noncompletion of the programme (<7 months; p<0.001). A further study assessing a major therapeutic programme found that those with co-morbid ASPD were more likely to drop out of treatment than those without a personality disorder (p=0.09).

In one study a greater number of ASPD symptoms predicted continued involvement in crime at 12 months (p<0.05). Another study found that ASPD was predictive of legal problems at the 6-month follow-up, although an earlier study by the same authors had found no differences in legal problems for those with ASPD when followed-up for 2.5 years, despite poorer psychosocial functioning. A further study found that those with ASPD had increased legal problems than those with no disorders (p<0.05).

There were generally no significant differences in the percentage of participants producing a positive opioid, cocaine or benzodiazepine urine sample between those with ASPD and those without, although one study found more urine samples testing positive for opioid and cocaine use in the ASPD group (p<0.05). One study also found significant reductions in drug use after 7 months’ follow-up for those with ASPD compared to those with other personality.
disorders or no personality disorder (p<0.05).

**Authors' conclusions**
The evidence suggests there were few differences in opioid treatment outcomes for those with or without ASPD. However, some treatment outcomes, such as cocaine use and criminal activity, did differ among those with and without ASPD.

**CRD commentary**
The review question was broadly defined in terms of the participants and outcomes. Inclusion criteria for the interventions and study design were not reported. Only two databases were searched for studies published in English, and this might have resulted in other relevant studies being missed. The methods used to select studies, assess validity and extract the data were not described, so it is not known whether any efforts were made to reduce reviewer error and bias. Since study validity was not assessed it is not possible to adequately comment on the reliability of the results presented.

Characteristics of the included studies were presented in the tables and described in the text. However, the results for individual studies were reported without supporting data, which means it is not possible to verify the findings reported in the review. In addition, several of the included studies reviewed the same cohorts; this may introduce bias into the results. In view of the differences between studies in terms of the study design, interventions and outcomes, a narrative description of the studies appears appropriate. In summary, the poor reporting of review methods and uncertainty about between-study differences mean that the reliability of the authors' conclusions is uncertain. Given the limitations highlighted, the conclusions of the review should be interpreted with caution.

**Implications of the review for practice and research**
Practice: The authors stated the need to develop drug treatment programmes aimed at refractory opioid users with co-morbid ASPD.

Research: Further studies are needed to explore the effect of other treatment modalities for opioid dependence and ASPD.

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This is a critical abstract of a systematic review that meets the criteria for inclusion on DARE. Each critical abstract contains a brief summary of the review methods, results and conclusions followed by a detailed critical assessment on the reliability of the review and the conclusions drawn.