From opioid maintenance to abstinence: a literature review
Kornor H, Waal H

CRD summary
This review estimated opioid abstinence rates from maintenance programmes and explored possible relationships with patient and treatment characteristics. The authors concluded that maintenance programmes may be suitable for a subgroup of patients, but further research is needed. Considerable limitations in the review methodology and documented evidence suggest that it is not possible to comment on the reliability of the conclusions.

Authors' objectives
To estimate the extent of opioid abstinence from former maintenance patients; to determine patient and treatment factors related to abstinence rates; and to assess the need for research.

Searching
MEDLINE (including PREMEDLINE) and PsycINFO (1966 to 2003) were searched using the reported search terms. The reference lists of key articles, including relevant review articles and textbooks, were also screened. Non-English language articles were excluded.

Study selection
Study designs of evaluations included in the review
All study designs were eligible for inclusion.

Specific interventions included in the review
Studies of treatment that was time-limited or had no pre-set time limit, or of abstinence-based policies, were eligible for inclusion. The mean duration of methadone treatment was 22.2 months (range: 1.0 to 48.1). Studies of detoxification per se, defined as programmes of less than 30 days’ duration, were excluded. The included studies comprised therapeutic detoxification programmes (for methadone patients considered treatment completers according to study-defined criteria and who choose to detoxify) or non-therapeutic detoxification programmes (all other reasons for ending methadone treatment); some programmes used flexible detoxification regimens. Some of the included studies also involved psychosocial services.

Participants included in the review
Studies of participants aged 18 years or older were eligible for inclusion. Most studies evaluated participants selected from methadone maintenance programmes; others were performed in general practice or in young heroin addicts. The majority of the participants were male and the mean age was 30 years (range: 19 to 35.6). The included participants had been regularly dependent on illicit opioids for an average of 7.4 months.

Outcomes assessed in the review
Studies that reported post-treatment abstinence rates were eligible for inclusion. Definitions of abstinence varied according to the substance used, frequency of use and time. Most of the included studies assessed abstinence using urine samples, clinical records, official records and interviews at follow-up.

How were decisions on the relevance of primary studies made?
Two reviewers independently determined the eligibility of the studies.

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. Abstinence rates, in addition to any treatment and patient characteristics reported to be related to abstinence rates, were extracted from each included study.

Methods of synthesis
How were the studies combined?
A pooled abstinence rate was obtained for all studies combined, and separately for those that addressed therapeutic or non-therapeutic detoxification. Results of relationships between patient and treatment characteristics were reported as positively or negatively related, or unrelated.

How were differences between studies investigated?
The influence of treatment and patient characteristics on abstinence rate was investigated (as detailed above).

Results of the review
Twelve studies (n=9,718) met the inclusion criteria. The designs of these studies were not clear, although the authors reported that studies were mostly naturalistic follow-up studies. Two of the studies appeared to be randomised controlled trials. The duration of follow-up ranged from 1 month to 103.2 months.

Overall, 33% of patients in the included studies were abstinent (or had a period of abstinence) from at least opioids for an average of 2 years following detoxification. The rates of abstinence ranged from 22 to 86%.

Treatment characteristics. The abstinence rates were higher in patients who volunteered to participate in detoxification programmes compared with those whose participation was based on staff recommendation (47% versus 23%). Methadone maintenance dose and psychosocial support were not related to abstinence rate.

Patient characteristics.

Inconsistencies were reported in the relationship between patient characteristics and abstinence rates. Age, ethnicity and educational level were all shown to have a positive relationship with abstinence rate in some studies, but not others. Similarly, duration or severity of dependence, detoxification difficulties, social problems and criminal behaviour were shown to have a negative relationship in some studies, but not others.

Authors’ conclusions
Abstinence-orientated maintenance therapy may be suitable for a subgroup of patients, but there is a substantial need for a research update.

CRD commentary
The review question was broadly defined in terms of the population, intervention and outcomes; no restrictions were applied to study design. The search strategy was not comprehensive and it was unclear whether methods were used to minimise publication bias. Furthermore, 22 non-English language articles were excluded at the search stage. Methods were used to minimise bias when selecting studies for inclusion, although it was unclear if methods to minimise reviewer error and bias were used in the data extraction process. The validity of the included studies was not assessed, thus it is not possible to comment on the reliability of the results.

Details presented on each of the included studies were limited, but highlighted considerable clinical and methodological variations. The authors did not report the study designs, and only 20% of those included in the study populations were reported in the results; the reason for this is not clear. The authors acknowledged this issue of selection bias and stated that the included studies provide no basis for generalisation. Results presented on prognostic factors were inconsistent and several studies did not report the statistical methods used to determine a relationship with abstinence rates; this suggests the need for cautious interpretation. Furthermore, many of the included studies were published some 20 to 30
years ago, suggesting that relevance to current practice is unlikely. Given the considerable differences across the included studies, the decision to combine the abstinence rates was not appropriate.

Based on the limitations of this review, both in the evidence presented and review methodology, considerable caution is needed in the interpretation of the included studies and the authors’ conclusion. However, it would appear that the call for further research is supported.

**Implications of the review for practice and research**

Practice: The authors stated that if the review had any implications for practice the following would be recommended. Patients should not be detoxified against their will or too early; patients in indefinite maintenance who achieve sufficient stabilisation should be able to make an informed decision on continuation or discontinuation of treatment; and time-limited treatment programmes may be an option for suitably chosen patients.

Research: The authors stated that there is a void in the research on buprenorphine. A comparison of the long-term outcomes of discontinued methadone and buprenorphine is needed. Comparisons between less and more severely opioid-dependent patients are also needed.

**Bibliographic details**


**DOI**

10.1080/09595230500170241

**Indexing Status**

Subject indexing assigned by NLM

**MeSH**

Buprenorphine /therapeutic use; Humans; Inactivation, Metabolic; Methadone /therapeutic use; Narcotic Antagonists /therapeutic use; Opioid-Related Disorders /prevention & control; Time Factors; Treatment Outcome

**AccessionNumber**

12006008072

**Date bibliographic record published**

31/03/2007

**Date abstract record published**

31/03/2007

**Record Status**

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.