Effectiveness of opportunistic brief interventions for problem drinking in a general hospital setting: systematic review

Emmen M J, Schippers G M, Bleijenberg G, Wollersheim H

CRD summary
The authors concluded that the evidence on opportunistic, psychosocial interventions for problem drinking in a general hospital setting is inconclusive. The conclusion appears reliable but it should be noted that most studies reported clearly no detectable effect of the intervention.

Authors' objectives
To evaluate the effectiveness of opportunistic brief interventions for drinking problems, as administered in a general hospital setting.

Searching
MEDLINE and PsycINFO were searched from 1966 to 2001; the search terms were reported. The authors also checked Current Contents, the Cochrane Library and the reference lists of current reviews, and contacted experts and the authors of the included studies. It was not reported whether any restrictions on language were applied.

Study selection
Study designs of evaluations included in the review
Randomised controlled trials were eligible for inclusion, as were quasi-randomised and non-randomised trials with equivalent groups at baseline. The duration of the trials ranged from 8 weeks to 18 months.

Specific interventions included in the review
Studies that compared an opportunistic, brief psychosocial (cognitive or behavioural) intervention for problem drinking with no intervention were eligible for inclusion. Studies had to administer the interventions in either a hospital or specialist out-patient clinic. The interventions evaluated in the included studies were confrontational or motivational interviews, advice from a physician or nurse, biofeedback on laboratory tests, counselling, audiovisual presentations, booklets and/or factual information. The interventions were administered by nurses, psychologists, physicians or specialist intervention teams.

Participants included in the review
The authors did not state any inclusion criteria with regards to the participants. The inclusion criteria of the included studies were based on weekly alcohol consumption, problems related to alcohol, evidence of alcohol on screening, a medical history showing alcohol misuse, and an increased concentration of gamma-glutamyltransferase. All of the trials included in the review excluded patients that had serious medical or psychiatric disorders, while five studies excluded patients with a history of advice or treatment for problem drinking or severe alcohol dependency. The participants in the included studies were male and female and the mean alcohol intake at baseline, where reported, ranged from 160 to 600 g per week.

Outcomes assessed in the review
Studies that evaluated alcohol consumption were eligible for inclusion. The included studies also reported other outcomes, such as self-reported problems related to alcohol and laboratory variables.

How were decisions on the relevance of primary studies made?
One reviewer screened the titles and abstracts.

Assessment of study quality
One reviewer assessed the quality of the included studies, while a second reviewer checked the assessment. Any disagreements were resolved by consensus. The authors of the primary studies were made aware of the quality assessment and were allowed to comment on it. Each included study was assessed on the basis of randomisation, blinding of the outcome assessors and loss to follow-up.

**Data extraction**
One reviewer extracted the data from the included studies, while a second reviewer checked the extraction. Any disagreements were resolved by consensus. Data on alcohol consumption were transformed into grams per week. The authors of the primary studies were contacted for missing information.

The mean differences (MDs) with 95% confidence intervals (CIs) between treatment groups were calculated, where possible, using the difference in alcohol consumption at baseline and follow-up. The standard deviations of baseline and follow-up alcohol consumption and the correlation between consumption were used to calculate the standard deviation of the change in consumption. When the correlation between alcohol consumption at baseline and follow-up was not provided, it was estimated based on a study that had reported the correlation.

**Methods of synthesis**
*How were the studies combined?*
The studies were tabulated according to study design and the results briefly summarised in the text.

*How were differences between studies investigated?*
Some differences between the studies were discussed in the text and presented in tabular format.

**Results of the review**
Eight studies (n=1,739) were included in the review. Three of the studies were individually randomised (n=321), four were cluster randomised (n=1,050) and one was a non-randomised controlled study (n=368).

In terms of quality, the loss to follow-up ranged from 9 to 50% and no studies conducted an intention-to-treat analysis. All of the randomised trials used clusters of consecutive patients during randomisation to avoid contamination; the non-randomised study used matching controls to ensure comparability. Three of the cluster randomised trials reported that the outcome assessors were blinded. The sample sizes ranged from 45 to 428.

One trial (n=45) reported a statistically significant reduction in weekly alcohol consumption for those in the intervention group (receiving advice from a physician) compared with the control group: the MD was -309 g (95% CI: -470, -148). The mean difference in alcohol consumption was not available for one trial. All other studies reported no statistically significant effects for any intervention on reducing weekly alcohol consumption compared with the control.

**Authors' conclusions**
The evidence on opportunistic interventions for problem drinkers is still inconclusive.

**CRD commentary**
The review addressed a defined research question in terms of the intervention, outcome and study designs of interest. The search included some attempts to locate unpublished studies, thereby reducing the risk of publication bias, but it was unclear whether any language restrictions had been applied. Only one reviewer assessed the relevance of the studies based on titles and abstracts, so it is possible that some studies might have been omitted at this stage or that selection bias occurred. Other stages of the review process (data extraction, quality assessment) were checked by a second reviewer, which helps reduce reviewer bias and error. The validity of the included studies was assessed.

Given the diversity of the studies, a narrative synthesis was appropriate. The review discussed the shortcomings of the evidence base and the conclusion regarding the inconclusiveness appears reliable, although it has to be noted that the
included studies (with few exceptions) reported clearly no detectable effects of the active intervention (rather than showing widely different results).

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

**Practice:** The authors did not state any implications for practice.

**Research:** Randomised controlled trials, using blinded outcome assessors and intention-to-treat analyses, are needed. Studies that include non-assessment control groups (as in a Solomon four-group design) should be considered in order to avoid the effects of the assessment on the control group.

**Funding**

Netherlands Organisation for Health Research and Development.

**Bibliographic details**


**PubMedID**

14729657

**DOI**

10.1136/bmj.37956.562130.EE

**Original Paper URL**

http://www.bmj.com/content/328/7435/318

**Indexing Status**

Subject indexing assigned by NLM

**MeSH**

Alcohol Drinking; Alcoholism /therapy; Controlled Clinical Trials as Topic; Hospitalization; Hospitals, General; Humans; Psychotherapy, Brief /methods; Randomized Controlled Trials as Topic; Treatment Outcome

**AccessionNumber**

12004009363

**Date bibliographic record published**

31/10/2007

**Date abstract record published**

31/10/2007

**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.