Preventive care in the emergency department. Screening and brief intervention for alcohol problems in the emergency department: a systematic review

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Authors' objectives
To review the medical literature to determine the strength of the evidence supporting the recommendation for screening and brief intervention for alcohol-related problems in the emergency department (ED) setting.

Searching
MEDLINE and the Cochrane Library were searched; although the search dates were not reported, the search terms were listed. Studies that were subsets or continuations of original data published earlier were excluded.

Study selection
Study designs of evaluations included in the review
No inclusion criteria relating to the study design were specified. The studies included in the review were randomised controlled trials (RCTs) and cohort studies.

Specific interventions included in the review
All studies of screening and brief interventions to detect alcohol problems were eligible for inclusion. The length and intensity of the interventions in the included studies varied. Most interventions consisted of short, motivational sessions that included feedback, education on the harm and consequences of heavy drinking, and advice to lower drinking consumption to low-risk levels. The duration of the initial session ranged from 5 to 60 minutes, while the number of sessions ranged from a single session to six follow-up sessions. Some studies followed up by phone call or letter.

Reference standard test against which the new test was compared
The review did not include any diagnostic accuracy studies that compared the performance of the index test with a reference standard of diagnosis.

Participants included in the review
Studies of high school or college students, adult primary care, ED adults and adolescents, and hospitalised adult patients were eligible for inclusion. Some studies included patients with alcohol dependence, while others targeted patients with less severe alcohol problems. The settings of the included studies were EDs, primary care centres, in-patient trauma centres, colleges, prenatal clinics, general population, occupational health clinics, in-patient surgery wards and hospitals. The patient were aged from 12 to 72 years.

Outcomes assessed in the review
The authors defined the primary outcome as the prevention of mortality and morbidity secondary to alcohol-related illnesses or injuries. The secondary outcomes measures included decreased alcohol consumption, fewer ED or outpatient visits and hospitalisation, decrease in social consequence, and increased referrals for follow-up and/or treatment. It was unclear whether the studies had to assess any of these outcomes to be included in the review, although all included studies assessed at least one of these outcomes.

How were decisions on the relevance of primary studies made?
A two-man team assessed studies for relevance using a predefined template.

Assessment of study quality
RCTs scored one point for each of the following criteria that they fulfilled: randomisation (described as randomised, description of randomisation process, appropriateness of randomisation procedure), double-blinding (described as double-blind, description of blinding method, appropriateness of blinding method), and description of withdrawals and
drop-outs (withdrawals and drop-outs described, loss to follow-up less than 20%).

Cohort studies were scored one point for each of the following criteria that they fulfilled: representative and well-defined sample of patients at a similar point in the course of the disease, adequate follow-up, and adjustment for important prognostic factors.

A two-man team assessed studies for validity using a predefined template.

**Data extraction**

A two-man team extracted the data using a predefined template.

**Methods of synthesis**

How were the studies combined?

A narrative synthesis of the studies was presented.

How were differences between studies investigated?

Differences between the studies were not formally assessed.

**Results of the review**

Twenty-seven studies were included. Of these, 21 (n=6,244) were classified as RCTs and 6 (n=1,374) were cohort studies. Studies included in a previous report (see Other Publications of Related Interest) were also included. This gave a total of 30 RCTs and 9 cohort studies.

Of the 39 studies included, 32 showed a beneficial effect on one or more of the outcomes assessed: 12 showed a decrease in morbidity and mortality (the primary outcome), 29 showed a decrease in alcohol consumption, 4 showed a decrease in ED or out-patient visits and hospitalisations, 4 showed a decrease in social consequence, and 4 showed an increase in referrals. The authors did not report the number of studies that found either no benefit or a negative effect of the intervention. The effects on each outcomes reported in the individual trials were summarised in a table, but this was difficult to interpret.

**Authors’ conclusions**

The review has demonstrated the efficacy of screening and brief intervention.

**CRD commentary**

This review answered a clearly defined objective. Inclusion criteria were reported for the participants and interventions, but it was unclear whether any such criteria were applied in terms of the outcome or study design. The authors defined their primary and secondary outcomes, and all included studies assessed at least one of these, but it was unclear whether the review was specifically limited to studies that reported on these outcomes. Only RCTs and cohort studies were included in the review and, again, it was unclear whether the review was limited to studies of these designs. The literature search only covered two databases and did not include any attempts to locate unpublished studies, thus it is likely that some relevant studies might have been missed. Some details of the review process were reported, but these were insufficient for the reader to determine whether appropriate steps were taken to avoid bias in the review process.

The narrative synthesis appears to have been appropriate given the differences between the studies. However, the synthesis could have been improved and the potential impact of differences between the studies discussed. The authors only reported on the number of studies finding a beneficial effect on each of the interventions, and not on the total number of studies that assessed each of the outcomes; this made the results difficult to interpret. A more detailed discussion on the differences between studies would also have improved the review. Individual study details were tabulated, although the accompanying ‘Results’ section was difficult to follow. The authors’ conclusions are supported
by the results presented, but should be interpreted with caution given the limitations highlighted.

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

Practice: The authors stated that screening and brief intervention for alcohol-related problems in the ED should be incorporated into clinical practice.

Research: The authors stated that further research is needed to answer the following questions.

- What is the exact message?
- Should it be tailored to different age groups?
- Who should screen and perform the intervention?
- What resources for follow-up are necessary?
- Is there benefit to performing the intervention and referral at the time of the visit?
- Is it cost-effective when performed in the ED?

**Bibliographic details**


**PubMedID**

12045080

**Other publications of related interest**


**Indexing Status**

Subject indexing assigned by NLM

**MeSH**

Alcoholism /diagnosis /prevention & control; Counseling /methods; Emergency Medicine /methods; Emergency Service, Hospital; Humans; Interviews as Topic /methods; Mass Screening /methods; Outcome and Process Assessment (Health Care); Preventive Medicine /methods; Research /standards; Research Design

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**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.