Reduced substance-abuse-related health care costs among voluntary participants in Alcoholics Anonymous
Humphreys K, Moos R H

Record Status
This is a critical abstract of an economic evaluation that meets the criteria for inclusion on NHS EED. Each abstract contains a brief summary of the methods, the results and conclusions followed by a detailed critical assessment on the reliability of the study and the conclusions drawn.

Health technology
Using Alcoholics Anonymous (AA), a self-help and mutual aid programme versus professional outpatient alcoholism treatment in patients suffering from alcoholism.

Type of intervention
Treatment.

Economic study type
Cost-effectiveness analysis.

Study population
Patients seeking help for alcoholism, who had no previous treatment history.

Setting
Primary care. The economic study was carried out in California, USA.

Dates to which data relate
The resource use and effectiveness data were recorded between January 1984 and December 1986. The prices were from 1994.

Source of effectiveness data
Effectiveness data were derived from a single study.

Link between effectiveness and cost data
The costing was undertaken retrospectively on the same patient sample as that used in the effectiveness analysis.

Study sample
Power calculations were not used to determine the sample size. A total of 201 individuals participated in the study. 135 patients were included in the AA group and 66 were included in the outpatient group. A total of 30% of patients refused the invitation to participate.

Study design
The study was a non-randomised trial with concurrent controls, carried out in several (number unspecified) centres. The duration of follow up was 3 years and the loss to follow up was 23%.
Analysis of effectiveness

The analysis was based on intention to treat. The primary health outcomes used were alcohol consumption in ounces of ethanol on a typical drinking day in the past month; symptoms of alcohol dependence in the past six months measured by means of a modified 11-item version of the Alcohol Dependence Scale; adverse consequences measured by a nine-item scale; and severity of depression measured by means of a nine-item depression scale from the Health and Daily Living Form. In all the scales used, higher values equated to poorer outcomes. The percentage of individuals in each group who experienced no alcohol consumption, and drinking-related problems in the six months before the three-year follow-up was assessed as a supplementary measure. Groups were shown to be comparable at baseline with respect to age, alcohol consumption in drinking days, number of days intoxicated in the past month, alcohol dependence score, and depression scale score. However, there were significant differences between groups at baseline with respect to income, education years and adverse consequences scale score (the first two figures were lower for the AA group and the latter registered a poorer outcome for the same AA group). In particular the latter was recognised as a prognostic feature.

Effectiveness results

The AA group reported a mean alcohol consumption at 3 years of 3.1 ounces of ethanol, the same value as for the outpatient group. In alcohol dependence the score was 3.2 for both groups and adverse consequences were 2.8 (AA) and 2.6 (non-AA). Depression scale scores were 14.1 for the AA group and 12.6 for the comparator. All these differences were not significant at conventional critical values. The percentage of individuals in each group who experienced no alcohol consumption or drinking-related problems in the six months before the three-year follow-up was 45.9% for the AA group against 34.8% for the control group.

Clinical conclusions

Repeated-measures analysis of variance of five outcomes criteria (those already mentioned plus number of days intoxicated in past month) showed no overall differences between groups. The authors reported that "Both groups experienced significant improvement on all five outcome variables, but the lack of significant group-by-time interactions indicates that the level of improvement was comparable across groups."

Measure of benefits used in the economic analysis

No summary benefit measure was identified in the economic study and only separate clinical outcomes were reported.

Direct costs

Costs were discounted. Broad quantities were reported separately. The costs measured were operating costs and overhead costs. The cost boundary adopted was that of the health care system. The estimation of quantities was based on actual data. The estimation of costs was based on published information from other studies (Holder et al’s list). The source of quantities was an inventory filled in by the patients. The quantity of resources was measured between January 1984 and December 1986. The prices referred to 1994. The costs of major surgical procedures related to alcoholism performed within the study period were not taken into account. The detoxification cost was omitted since it was regarded as common to both alternatives.

Statistical analysis of costs

F test was performed to compare groups in terms of costs.

Indirect Costs

Not considered.

Currency
Sensitivity analysis
The only parameter investigated in the sensitivity analysis was discount rate, which was varied from 5% to 10%.

Estimated benefits used in the economic analysis
Not applicable.

Cost results
The discount rate was 5%. The total cost per person in the AA group was $2,251 and cost per person for the outpatient group was $4,077. The F statistic was 5.52 with df=1,199 (p<0.02).

Synthesis of costs and benefits
A synthesis was not performed since AA was the weakly dominant strategy. The authors claimed that the change in the discount rate "did not significantly affect the findings".

Authors' conclusions
Voluntary AA participation may significantly reduce professional treatment costs. Clinicians, researchers, and policymakers should recognise the potential health care cost offsets offered by AA and other self-help organisations.

CRD COMMENTARY - Selection of comparators
The reason for the choice of comparator was clear.

Validity of estimate of measure of benefit
Despite having some strengths derived from the study's naturalistic approach, the internal validity of the effectiveness results is weakened by the lack of randomisation.

Validity of estimate of costs
Insufficient details of the methods of cost estimation were given.

Other issues
Given the lack of randomisation and comprehensive sensitivity analysis, the results need to be treated with some caution.

Source of funding
Research supported by National Institute on Alcohol Abuse and Alcoholism grants AA10652 to Dr Humphreys and AA092863 and AA06699 to Dr Moos, and by the Department of Veterans Affairs Health Services Research and Development Service and Mental Health and Behavioral Sciences Service.

Bibliographic details
Humphreys K, Moos R H. Reduced substance-abuse-related health care costs among voluntary participants in Alcoholics Anonymous. Psychiatric Services 1996; 47(7): 709-713

PubMedID