TREATMENT STRATEGIES AND INDIVIDUAL DIFFERENCES

JONATHAN CHICK
Department of Psychiatry, University of Edinburgh

The cost effectiveness of 'screening and brief intervention' for alcohol problems in primary care should not be exaggerated. The research studies found that GPs screened about 1,000 patients in order for 5 to become low-risk drinkers who would not otherwise have done so. For drug users, although even a few sessions of motivational interviewing helps, there appears to be no evidence for one session 'brief intervention'.

There are effective treatments, psychosocial (including '12 step') and pharmacological, for alcohol problems including for the most severely affected ('dependent'). These treatments can lead to stable abstinence or low-risk use. The evidence for effective abstinence treatment for drug dependence is less.

The younger the start of drinking, the more likely it is that the individual will not develop stable personality and social supports. Alcohol can permanently affect the developing (teenage) brain. Early onset of drinking problems is associated with less good response to current treatment. So the next generation of problem drinkers may present more treatment challenges, as well as developing liver cirrhosis and permanent brain damage at a younger age. More pharmacological treatments are in the pipeline.

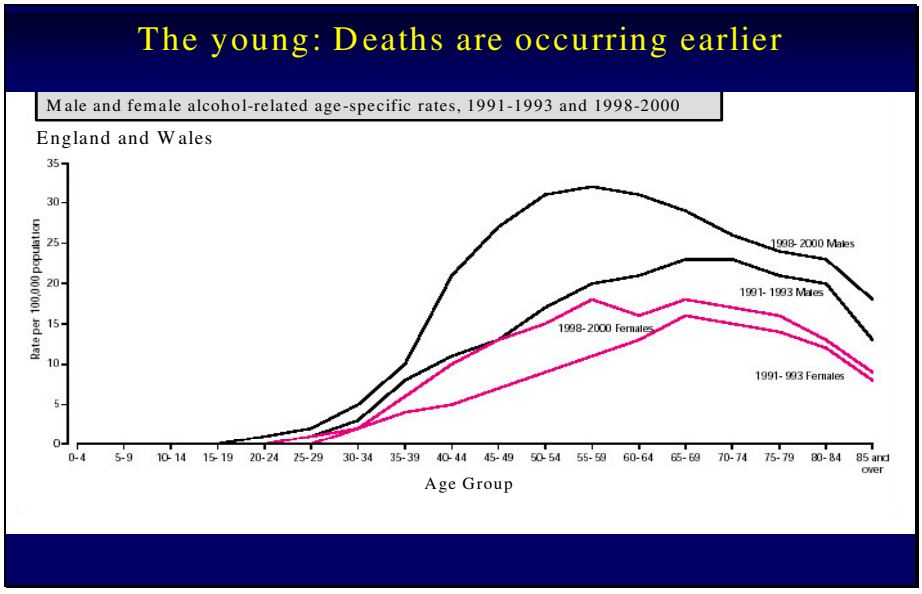
During the last decade, UK drinkers died younger than in the previous decade, many well inside the economically productive age range. Some early deaths are related to young heavy-session drinking. Other deaths are due to dependence.

If effective treatments for dependence are applied, one death can be prevented at a net saving to the NHS of £1,122 for acamprosate treatment, and £3,073 for coping skills therapy, because supplying those treatments to all patients seen spares NHS costs in treating repeated alcohol-related disorders, as well as saving lives. Unfortunately, in the UK, there is a dearth of personnel trained to use existing psychosocial and pharmacological treatments of proven efficacy.

Central spending on prevention and treatment is considerably lower for alcohol than illicit drugs: Spending per related death is £118,750 for illicit drugs, and £25 for alcohol.

WORSENING PROBLEM

- Younger people are drinking more and dying at a younger age as a result of their drinking than in the past.
- The peak age of alcohol-related deaths in males was in the 60s in the early 1990s and is presently in the 50s, indicating a considerable shift in a relatively short time frame. Many more deaths are now occurring between 25 and 40.



* The increase may be due to the fall in the real price of alcohol as a percentage of weekly earnings, e.g. A 30-50% decrease in the price of foreign spirits in Switzerland in 1999 was associated with a 50% increase in the amount of spirits consumed by the under 30s.
* The increase may be due to magazine and television advertising exposure, which predicts increases in teenage alcohol consumption. The British Medical Association supports a ban on alcohol advertising.
* The increase may be contributed to by increased rates of hepatitis C. However, probably less than 8% of those with alcoholic cirrhosis of the liver also have hepatitis C.

TREATMENTS

* The effectiveness of treatments for alcohol dependence has been formally assessed by NHS Quality Scotland.
* Some dependent patients sustain improvement without interventions as shown by follow-up studies in the community. However, when treatment is offered the success rates, in terms of one-year abstinence from alcohol, are approximately doubled.
* The 12-Step approach adopted by Alcoholics Anonymous is effective but its success is difficult to quantify because there have been no randomised control trials. When compared to other psychological treatments over a three-year period, those introduced to AA fair well.
* The one-year success rates of most British treatment studies are very low, only 15% managing to stop drinking or curb drinking to sensible levels.
* Most studies have shown both naltrexone and acamprosate to be fairly effective treatments for alcohol dependence.

- Acamprosate is thought to modulate GABA-glutamate disturbances. Many high quality studies have tested its effectiveness but the improvement overall is not large.
- Naltrexone reduces endorphin activity by blocking their receptors. It is used to treat hard drug addiction but is only effective if administered under supervision. Its use in alcohol dependence in the UK has to be off license. A monthly injectable naltrexone has successfully completed initial trials.
- It is not yet clear whom these treatments work best with and which adjunctive treatments might be needed.
- Psychosocial treatments are the most effective treatment for alcohol dependence. Behavioural therapy teaching life and coping skills shows people how to communicate better, handle stress and anxiety, and use alternatives to drinking to help them relax.
- Motivational interviewing, marital and family therapy and behavioural self-control training are also well supported by evidence.

Number of patients pooled for the meta-analysis Basic Support : typical one year outcome in UK		**% abstinent or controlled drinking (study duration varies)** 15%
Acamprosate Naltrexone	4259 2112	26% 21%
Unsupervised disulfiram	486	19% not sig. diff from control
Coping skills training	631	27%
Behav. self-control training	276	24%
Motivational interviewing	154	25%
Marital/family/community reinforcement therapy	742	26%

Meta-analysis (published & unpublished data) of studies with
'support' or no-treatment controls, and categorical outcome data reported.

COSTS

- In a cohort of 1000 patients, the net cost saving of coping skills therapy is estimated to be £274,000. The net cost saving for acamprosate therapy is estimated at £69,000, despite the cost of the drug itself and the doctor prescribing it.
- When calculating the economic costs of alcohol dependence, it is assumed that patients who attain one year's abstinence do not incur later alcohol-related health costs.
- Effective treatments give net savings due to lower subsequent hospitalization and other psychiatric and physical disease-related costs.

The cost of dying of end-stage liver disease. 153 patients followed for 5 years 1991-5

- 129 patients with esophageal varices had 202 admissions over 5 years (mean13.7 day@ $30,980)
- 38 died after 24 days with a mean charge of $67,091
- 7 died on admission at $110,576 per admission
- 17 had transjugular intrahepatic portosystemic shunt @ $43,209
- 6 had surgical shunt @ $53,994
- 7 had liver transplantation @ $222,968

36.7% of all charges were for patients who died during the 5 years

(Wong et al Arch Intern Med 1997, 157:1429-32)

* There are few treatments in the Health Services that save lives whilst saving money. The net health care saving per death averted is £3073 for coping and social skills training, £2388 for marital and family reinforcement therapy, and £1122 for acamprosate therapy.

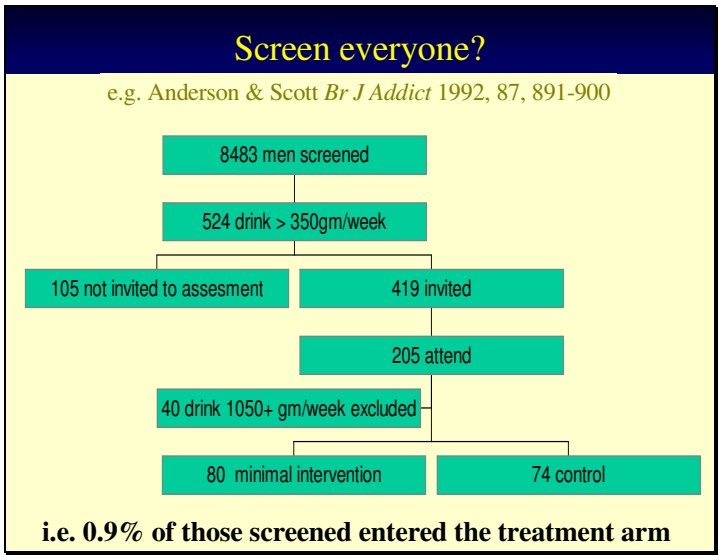
- Central spending on treatment and prevention of alcohol is £1.1 million compared to £95 million for the illegal drugs.
- About 40,000 deaths a year are directly related to alcohol compared to only 800 deaths a year related to illegal drugs.
- Therefore, central spending on treatment and prevention is grossly disproportionate: £118,750 per death for illicit drugs compared to £25 per death for alcohol.

MISDIRECTED SPENDING

* Prescriptions for antidepressants (such as Prozac) are one of the largest single costs on the NHS drug bill. 1 in 3 or 4 alcoholics newly referred to the Alcohol Problems Clinic have already been prescribed an antidepressant by the GP. This is not only the practice in the UK. For example, the chauffeur driving the car in which Princess Diana died was reported to be taking tiapride, a drug prescribed in France specifically for alcoholism, and Prozac.
* Antidepressants are not effective treatments for problem drinking. They only help those with a primary underlying depressive illness, or perhaps those with 'late onset' alcoholism.
* Prescription of antidepressants may worsen 'early onset' patients (those whose regular or problematic drinking commenced before the age of 25).

BRIEF INTERVENTIONS

- When patients are screened and those drinking at risk (e.g. over 3 pints of beer a day) selected, a brief discussion and non-judgemental advice increases the number who 6-12 months later have reduced their drinking to non-risky levels.
- Such brief interventions are not sufficient for patients who are actually seeking treatment. They have probably already been offered advice by family, friends or their GP.



- The NNT is the Number Needed to Treat for one more patient to reduce consumption to non-hazardous levels than in the control group.
- For brief interventions the NNT is 7-9, which compares favourably with treatments for other medical conditions, e.g. the NNT is 30-90 for statins to prevent cardiovascular mortality following myocardial infarction.
- The NNS is the Number Needed to Screen for one patient detected in the screening to reduce consumption to non-hazardous levels. From three British studies screening everybody that came into contact with primary care, less than 5% of those screened met the criteria and entered the treatment arm. For an NNT of 8, it means that out of every 1000 people screened, only 6 would become low-risk drinkers who would not otherwise have done so, i.e. NNS=6/1000.
- The Scottish SIGN guideline favours 'targeted' screening, for pragmatic and cost-effectiveness reasons, in preference to the screening of whole primary care populations.
- In hospital settings, brief interventions by nurses have tended to show modest effects. For example, counselling in a motivational style by a nurse for those presenting with alcohol-related facial injuries resulted in reduction in alcohol consumption at 3 and 12 months post accident.
- Brief interventions for drug users are less well researched and seem not to be particularly effective. In a study of hospitalised psychiatric patients with a psychiatric illness, neither an individual motivational interview (30-45mins) nor a self-help booklet reduced cannabis use. There was a modest short-term effect of the motivational interview on aggregate drug and alcohol use.
- Brief interventions are not sufficient to treat established alcohol problems or dependence. A 2-hour motivational intervention failed to alter recurrent drinking behaviour in alcoholics with gastrointestinal disease.
- Those already with a severe degree of illness seeking treatment require referral to more specialised help. In established problem drinkers detected in general hospitals, the results of referral to specialised treatment were significantly better than a single risk reduction counseling session.