The long and winding road to widespread implementation of screening and brief intervention for alcohol problems

A historical overview with special attention to the WHO initiatives

Towards a population strategy

Any historical overview of the alcohol problem and its prevention or treatment naturally starts with Elvin Morton Jellinek (1890–1963). He was born in New York, but was mainly educated in Europe. In 1952 he was engaged by the World Health Organization (WHO) in Geneva as a consultant on alcoholism. The predominant view at the time was that alcoholism was a disease, most likely with a strong genetic component, and that some people were alcoholic and others not. Jellinek’s main contribution was to describe five different types of alcoholism. According to his view, there were both evident and “hidden” alcoholics among the general population. In 1960 Jellinek published his seminal book *The Disease Concept of Alcoholism* (Jellinek 1960). Following Jellinek’s work, the American Psychiatric Association began to use the term disease to describe alcoholism in 1965 and the American Medical Association followed in 1966.

Alcoholism as a disease implies that the treatment becomes the responsibility of general health care systems, particularly within psychiatry. However, the traditional treatment

ABSTRACT

O.G. Aasland & P. Nygaard & P. Nilsen: The long and winding road to widespread implementation of screening and brief intervention for alcohol problems. A historical overview with special attention to the WHO initiatives

Before 1970, special institutions, often prison-like, were built for the severely dependent. The effect of this type of treatment, often lasting for months or even years, was hard to document scientifically. During the 1970s several steps were taken towards a more preventive strategy that involved delivery of alcohol interventions in general health care settings, particularly within primary health care.

The World Health Organisation’s (WHO) introduction of the concepts of hazardous and harmful drinking represented a shift from the traditional dichotomous view of individuals being alcoholic-or-not to a continuum where, in line with Rose’s “prevention paradox”, a large number of people with low risk may give rise to more cases of disease than the small number with high risk. The need for efficient methods to detect persons with various degrees of alcohol risk was evident, and a WHO multi-national project that resulted in the publication of AUDIT (Alcohol Use Disorders identification Test) was carried out in the mid 1980s.

The usefulness of this principle of case finding was then investigated in a
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system were reluctant to acknowledge this. In many countries, special institutions, often prison-like, were built for the severely dependent. The effect of this type of treatment, often lasting for months or even years, was hard to document scientifically. However, several steps were taken during the 1970s towards a preventive strategy that involved delivery of alcohol interventions in general health care settings.

In his book *The Hidden Alcoholic in General Practice*, Wilkins (1974) described a study from the UK where some pre-determined risk criteria (certain somatic or psychiatric diseases or symptoms, certain occupations, and a number of social problems known to be alcohol related) were combined with data from a specially developed patient questionnaire to identify patients with possible alcoholism. Wilkins’ results suggested that “the problem of alcoholism in the community as a whole is probably far greater than hitherto suspected, the wider social and economic implications of this being indicated, and that it is possible for general practitioners, by spending about 15 minutes per week interviewing selected patients, to improve considerably their detection of the hidden alcoholic and thus increase the chance of being able to help him and those around him” (Wilkins 1974; back cover).

An important contribution to the pursuit of new intervention models was made by Edwards et al. (1977). They showed that there were no significant differences after one year between one group of alcoholics who received one brief session of counselling and a control group with several months of intensive in and outpatient treatment. The outcome variables included drinking behaviour, as well as social adjustment variables, e.g. sick leave periods and marital situation.

In 1979 Russell et al. published an interesting article on the effect of general practitioners’ advice for smoking cessation. Russell conducted a controlled study with interventions of various intensity, and found that after one year, more than 3% of the smoking patients who had only been subjected to one brief advice session remained non-smokers. “If all the GPs in the UK participated the yield would exceed half a million ex-smokers a year,” he observed. “This target could not be matched by increasing the existing 50 or so special withdrawal clinics to 10 000” (Russell et al. 1979, 231).

Russell’s and his colleagues’ observation coincided with subsequent multinational WHO project of brief intervention, as well as in several other similar projects. Many of these projects have proven quite efficient, but screening and brief intervention for alcohol problems is still not standard procedure in primary health care. The paper discusses some of the reasons why.

**KEYWORDS**

Alcohol, screening, brief intervention, primary health care, history, WHO, AUDIT
the work of English epidemiologist Geofrey Rose (1926–1993), who described the so-called prevention paradox in 1979. This principle suggests that alcohol-related problems in a population come more from moderate drinkers than from heavy drinkers because there are so many more moderate drinkers, even though these drinkers are individually at lower risk of adverse outcomes than heavier drinkers. A major implication of the prevention paradox is that there may be substantial benefits to public health, e.g. if health care providers implement secondary prevention interventions to reduce alcohol risk and harm in the population, but there will be relatively small health gains to specific individuals (Rose 1981).

The WHO project on Identification and Management of Alcohol-Related Problems

In November 1979, a WHO Expert Committee on “Problems Related to Alcohol Consumption” met in Geneva. The purpose was to consider what could be done about alcohol problems on a broad scale. The meeting proved to be an important turning point in the WHO’s re-orientation towards a population strategy to the alcohol problem. It was noted in a 1980 document of the meeting, “In the past, most programmes concerning alcohol problems focused on the individual drinker, particularly the heavy drinker, including the person who had become dependent on alcohol. In recent years, however, attention has increasingly turned to the consequences of drinking for the community, for society in general” (WHO 1980, 7). There was an urgent call for the development of strategies that could be applied in primary health care settings with a minimum of time and resources (WHO 1980).

In early 1981, Jan Ording, a Swedish government official (originally from Norway), at the time director of the Alcohol program at WHO Headquarters in Geneva, invited UK psychologist Ray Hodgson and Norwegian physician Olaf G. Aasland to an informal one-day meeting in Geneva. They were each given an office, pencil and paper, and the assignment to come up with first drafts of two international collaborative projects, one on screening (Aasland) and one on brief intervention (Hodgson). The instruction was to develop standardized methods that were simple enough to be implemented in primary health care systems worldwide.

Subsequently, international experts were brought together and research groups were formed in Oslo, Norway (screening) and Farmington, USA (brief intervention). This was the beginning of the “WHO Collaborative Project on Identification and Treatment of Persons with Harmful Alcohol Consumption” (Saunders & Aasland 1987), later renamed “Project on Identification and Management of Alcohol-Related Problems” (Babor & Grant 1992).

In 1983, an expert committee produced a report that received much positive attention, Problems Related to Alcohol Consumption (WHO 1983). The report introduced the concepts of hazardous and harmful drinking. Hazardous drinkers have an elevated risk (physical, psychological and social harm) from alcohol consumption that exceeds daily, weekly, or per-occasion thresholds, whereas harmful drinkers are already experiencing physical, social or psychological harm due to
their consumption. Neither hazardous nor harmful drinkers are necessarily dependent. It was stated that “the distinction between hazardous consumption and harmful consumption implies two different intervention models: the former suggesting an educational or informative approach, the latter more of a treatment or intervention strategy” (WHO 1983, 5).

The introduction of the concepts of hazardous and harmful drinking represented a conceptual shift from the traditional dichotomous view of individuals being alcoholic-or-not. The idea of a continuum of alcohol consumption was very much in line with Rose’s notion that a large number of people with low risk may give rise to more cases of disease than the small number with high risk. The expert committee stressed the need for efficient methods, which could be implemented in primary health care settings, for detecting persons with harmful as well as hazardous alcohol consumption.

The result of the WHO project was a 10-item screening questionnaire that was given the name AUDIT (Alcohol Use Disorders Identification Test) (Saunders & Aasland 1987), which since has become widely used worldwide (a Medline search of “AUDIT and alcohol” today yields 721 publications from many different countries). The questionnaire has become a standard instrument and is available free at the WHO’s home page (http://whqlibdoc.who.int/hq/2001/WHO_MSD_MSB_01.6a.pdf). AUDIT was designed to be used internationally and was validated in a study using patients from Australia, Bulgaria, Kenya, Mexico, Norway and USA.

The development of AUDIT as an instrument for use in primary health care settings was inspired by the success of a 1983 intervention study in Malmö, Sweden (Kristenson et al. 1983). Kristenson and colleagues identified individuals at risk using GGT (gamma glutamyl transferase), a liver enzyme that is often pathologically elevated due to a high consumption of alcohol, especially in middle-aged men. The study population consisted of 585 men with two consecutive elevated GGT values, randomly allocated either to an intervention group or to a control group. The men in the intervention group were repeatedly encouraged to lower their overall alcohol consumption, with GGT measurements used as biofeedback. The controls were informed by letter to be restrictive with their alcohol consumption, and they received new invitations for measurements of their liver enzymes after 2, 4, and 6 years. The intervention and control groups were well matched and followed over a period of 2 to 6 years. Two and 4 years after the initial screening, the GGT values in both groups were significantly decreased. However, compared with the control group, the intervention group showed a significant reduction of 80% in sick leave periods during 4 years, of 60% in hospital days during 5 years, and of 50% in mortality during 6 years.

AUDIT differs from the traditional screening instruments (e.g. CAGE and MAST) in that it is a risk assessment instrument, and not merely a diagnostic tool for alcoholism. Questions 1–3 of AUDIT deal with alcohol consumption, 4–6 relate to alcohol dependence, and 7–10 consider alcohol-related problems. The AUDIT score ranges from 0 to 40, and the cut-offs may vary according to population (gender, and age) and setting (the “wetness” of the
The instrument may easily be used to define three risk groups (no risk, moderate risk, and high risk), reflecting the WHO terminology of hazardous and harmful alcohol consumption.

Originally, AUDIT also comprised a second instrument, a clinical procedure involving clinical examination and biochemical markers. The idea was that the clinical procedure could be conducted as an integrated part of a regular clinical examination, without mentioning alcohol at all to the patient, and that those patients who scored above a certain level should be counselled on their alcohol use in a standardized way, using the 10-item questionnaire.

The clinical procedure was influenced by a French experience. Thomas F. Babor, at the University of Connecticut, who was a member of the original project group and co-ordinator of the second phase of the WHO collaborative study, had spent some time in France and learned about the Le Gô Grid, a screening procedure based on grades of different clinical signs and symptoms, such as conjunctival injection (red eyes), and tremor of hands and tongue. Le Gô Grid was developed and used by chief physician of the French railroads, Dr. P. M. Le Gô (1976). Elements of the procedure were included in the clinical AUDIT. However, the quest for a universal instrument that did not require a clinical examination or laboratory tests was so strong that the clinical part of AUDIT was soon overshadowed by the 10-item questionnaire, and is now almost forgotten. It was included in the first official WHO AUDIT guidelines (Babor et al. 1992), but not in the second edition (Babor et al. 2001).

Phase II and III of the WHO initiative

The development of the other branch of the WHO initiative, the brief intervention, was influenced by Russell’s work on smoking. Rose’s prevention paradox also provided crucial inspiration, as the idea was to provide interventions for a relatively large number of moderate risk drinkers in order to reduce the total burden of alcohol-related problems in the population (i.e. a population strategy), rather than to focus on identified or hidden alcoholics and try to make them sober (i.e. a high-risk strategy). The belief was that there exists a large group of drinkers with moderate risk or problems, many of which might be motivated to cut down on their drinking if they only were told how to do this.

The first AUDIT manual was published in 1989. The instrument was subsequently applied in numerous intervention studies, in a variety of settings. Many studies used biological alcohol markers to identify drinkers who then received brief interventions by physicians and other professional categories, often in combination with information strategies such as leaflets with advice on “how to cut down on your drinking”.

Phase II of the WHO project was a cross-cultural randomized controlled trial to test the usefulness of alcohol screening when it is linked to brief intervention. Primary health care units in Australia, Bulgaria, Costa Rica, Kenya, Mexico, Norway, the UK, Russia, the USA, and Zimbabwe participated. Phase II has been well described in a collective publication from the members of the WHO Brief Intervention Study Group (1996). Male patients exposed to the interventions reported approximately 17%
lower average daily alcohol consumption than those in the control group. Reductions in the intensity of drinking (average amount on a “typical drinking day”) were approximately 10%. For women, significant reductions were observed in both the control and the intervention groups. Five minutes of simple advice were as effective as 20 minutes of brief counselling.

A large number of randomized controlled trials were conducted throughout the 1990s, with most studies demonstrating that relatively brief interventions in primary health care settings were successful in reducing alcohol consumption among hazardous and harmful drinkers. Systematic reviews and meta-analyses confirmed that brief interventions were indeed effective (Kaner et al. 2007). Thus, one would think that the stage was set for large-scale implementation of screening and brief interventions in primary health care across the globe. However, this certainly was not the case.

Due to the poor implementation of screening and brief intervention in primary health care settings, a third phase of the WHO project was set up and co-ordinated by an Australian group around 1995. The aim was to evaluate various strategies to implement early identification and brief intervention in primary health care, with special attention to how to motivate general practitioners to use the technology. In a preparatory study, Gomel et al. (1998) randomly assigned general practitioners to one of three marketing strategies designed to promote the uptake of a brief intervention package for hazardous and harmful alcohol consumption. The strategies were direct mail, tele-marketing, or academic detailing. Tele-marketing was found to be more cost-effective than academic detailing and direct mail in promoting the uptake of the package.

Two systematic reviews of strategies have demonstrated that increased screening and brief intervention activity among health care providers can be achieved. Activity in screening and brief intervention has generally shown to increase with the intensity of the implementation efforts, e.g. the amount of training or support provided, although the level of implementation has varied considerably among different studies. However, the training efforts in most studies have been very limited, typically lasting between 30 minutes and 2 hours (Anderson et al. 2004; Nilsen et al. 2006).

A long and winding road
There exists a relatively large group of hazardous drinkers, many of which are frequent users of the primary health care systems in many countries. However, widespread implementation of screening and brief intervention has not been achieved despite the fact that evidence for the efficacy of these interventions has been proved beyond doubt. Factors that affect health care providers’ reluctance to inquire about alcohol or provide interventions are well documented (see Nilsen et al. 2008, in this issue for an overview). Many studies have reached the conclusion that health care providers are unmotivated or ambivalent in raising the issue of alcohol drinking with patients who are not seeking help for alcohol-related problems.

The possibility of achieving more widespread implementation of screening and brief interventions in primary health care is influenced by factors at many levels.
However, research thus far has largely focused on individual health care providers’ knowledge, attitudes, and practice. Still, it is important to recognize that this activity does not occur in a vacuum, as the health care providers are influenced by the organizational context. Future research needs to more explicitly consider the impact of organizational conditions such as the organizational culture, management support, resource constraints, and financial incentives for screening and brief intervention activity.

There is also a need to explore the societal conditions for this strategy. The move towards a population-based strategy has been influenced by WHO initiatives and led by researchers, but to what extent do the general public support an increased emphasis on alcohol in primary health care? What are their attitudes to being asked about alcohol habits as part of routine health care consultations? Furthermore, do the general public view alcohol problems in terms of a continuum, rather than in terms of a more dichotomous alcohol-dependency-or-not? Do people understand the concept of hazardous drinking and to what degree do they recognize such drinking as a tangible health hazard? Health care providers’ reluctance to screen and deliver brief interventions to non-dependent patients is likely to reflect the general public’s attitudes to the alcohol problem and its solution. Still, the underlying conditions for this strategy do not seem to have been thoroughly investigated.

Implementation of research findings into health care practice is generally a complex undertaking that often falls short of expectations. The alcohol field is not alone in experiencing difficulties in translating research evidence into practice. Studies in the USA and the Netherlands suggest that about 30–40% of patients do not receive care according to current scientific evidence and that about 20–25% of care provided is not needed or is potentially harmful (Eccles et al. 2005). Implementation research, i.e. the scientific study of methods to promote the uptake of research findings, has grown considerably in importance in recent times.

Clearly, the road to widespread implementation of screening and brief intervention for alcohol problems in primary health care settings will be long and winding. It may take considerable time before this goal is achieved, but it is important to carry on with research to identify knowledge gaps at different levels, from the individual health care provider to the organisational environment and to society as a whole, as well as prioritizing research requirements to address them.

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