

## Dying for a drink

*Global suicide prevention should focus more on alcohol use disorders*

**S**uicide prevention requires a comprehensive response to the intimate link between alcohol use disorders and suicide. Major community based biographical (psychological autopsy) studies in the West and the East have consistently reported a high prevalence of alcohol use disorders among people who committed suicide—for example, 56% in New York,<sup>1</sup> 43% in Northern Ireland,<sup>2</sup> and 34% in Madras.<sup>3</sup> Such figures are far in excess of the prevalence of alcohol use disorders in the general population. In fact, alcohol use disorder was the most frequent DSM-III-R axis I psychiatric disorder (mood, psychotic, substance use, etc) in the studies cited. According to a meta-analysis of mortality studies, the lifetime risk of suicide is 7% for alcohol dependence.<sup>4</sup> Interestingly, in a recently reported time series analysis a significant positive relation between per capita alcohol consumption and gender and age specific suicide rates was revealed most often in dry (low consumption) cultures (northern Europe) and least often in wet cultures (southern Europe).<sup>5</sup> How may we use this link in devising strategies to prevent suicide?

In the Northern Ireland suicide study (case-control psychological autopsy) the estimated risk of suicide in the presence of current alcohol misuse or dependence was eight times greater than in the absence of current alcohol misuse or dependence (odds ratio 8.4, 95% confidence interval 3.3 to 21.2).<sup>6</sup> Apart from an increased risk associated with the destructive psychosocial consequences of alcohol misuse, an editorial exploring the biology of suicide has highlighted evidence for an alcohol effect on serotonin neurones in the brain stem and reduction of serotonin transporter function in the prefrontal cortex, both of which may decrease protection against suicidal impulses.<sup>7</sup> The fact that 89% of suicides with alcohol dependence in the Irish study had at least one other comorbid mental disorder<sup>2</sup> highlights the complexity of the challenge faced by healthcare professionals attempting to intervene when death is imminent (hence the desirability of prevention and early intervention).

In a 5-10 year prospective study of suicide attempters admitted to Philadelphia General Hospital, alcoholism was the strongest single predictor (unadjusted odds ratio 5.18, 1.94 to 13.81) of subsequent completed suicide.<sup>8</sup> The five year report of the National Confidential Inquiry into Suicide and Homicide by People with Mental Illness recently revealed that 40% of people who committed suicide in England and Wales who had been in contact with mental health services

within one year of death had a history of alcohol misuse (53% in Scotland, 62% in Northern Ireland) and 19% had misused both alcohol and drugs (26% in Scotland, 27% in Northern Ireland).<sup>9</sup> The authors stated that “the combination of mental illness and substance misuse is probably the greatest clinical problem facing general adult mental health services” and suggested that “a coordinated approach to training, service planning, and research is needed to improve the ability of the general service to address this problem.” Therefore, after attempted suicide (deliberate self harm) and presentation to mental health services, the detection and effective treatment of alcohol use disorders are important aspects of suicide prevention.

It has been claimed that in the former Union of Soviet Socialist Republics the major antialcohol campaign introduced by President Gorbachev in 1985 (prices of alcoholic beverages raised substantially, fewer retail outlets, reduced tolerance of public drunkenness, etc) resulted in significant reductions in alcohol consumption and suicide rates (19% for women, 32% for men).<sup>10</sup> In a US study using pooled cross sectional time series data on youth suicide and the minimum legal drinking age in 1970-90, the suicide rate of 18-20 year old youths living in states with a minimum legal drinking age of 18 was 8% higher than the rate among 18-21 year olds in states where the legal drinking age is 21.<sup>11</sup> The authors estimated that lowering the drinking age from 21 to 18 in all states could increase the number of suicides in the 18-20 year old population by about 125 each year. These studies highlight the importance of political and public policy decisions in suicide prevention.

In a study of nearly 3000 North Carolina residents aged 18-97 recent and lifetime alcohol disorders were a third less common among weekly churchgoers and recent alcohol disorders were 42% less common among those who frequently read the Bible or prayed privately.<sup>12</sup> The Northern Ireland Suicide Study revealed that a lower risk of suicide was associated with a higher religious commitment score.<sup>6</sup> However, a high commitment score did not remain as a significant independent “protective” factor after adjustment for axis I psychiatric disorder, suggesting that the protective effect of religious commitment may be mediated partially by a reduced likelihood of a committed individual developing an axis I disorder (including alcohol use disorder). Healthcare professionals should be aware of the potential influence of religious commitment on behaviour affecting health.

Global suicide prevention strategies should include a focus on alcohol use disorders in terms of prevention, brief intervention by adequately trained and supported non-specialist staff (including in primary care), availability of multidisciplinary specialist alcohol services, and aggressive treatment of comorbid depression. The opportunity for primary care based intervention in suicide is supported by the finding in the Irish study of contact with a general practitioner within six months as an independent risk factor for suicide after adjustment for axis I disorder.<sup>6</sup> Comprehensive national alcohol policies (including effective, recurring “Defeat alcoholism” campaigns, along the lines of the earlier “Defeat depression”

campaign in the United Kingdom) are needed across the world to prevent and promptly manage alcohol related problems, including the risk of suicide. These should be based on sustained cooperation between government departments, the drinks industry, the leisure industry, primary care, mental health (including specialist alcohol) services, general hospital clinicians, social services, health promotion agencies, employers, teachers, and the media. Of course, national alcohol policies need to dovetail with national suicide prevention strategies.

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- 1 Conwell Y, Duberstein PR, Cox C, Herrman JH, Forbes NT, Caine ED. Relationship of age and axis I diagnosis in victims of completed suicide: a psychological autopsy study. *Am J Psychiatry* 1996;153:1001-8.
- 2 Foster T, Gillespie K, McClelland R. Mental disorders and suicide in Northern Ireland. *Br J Psychiatry* 1997;170:447-52.
- 3 Vijayakumar L, Rajkumar S. Are risk factors for suicide universal? A case-control study in India. *Acta Psychiatr Scand* 1999;99:407-11.
- 4 Inksip HM, Harris EC, Barraclough B. Lifetime risk of suicide for affective disorder, alcoholism and schizophrenia. *Br J Psychiatry* 1998; 172:35-7.
- 5 Ramstedt M. Alcohol and suicide in 14 European countries. *Addiction* 2001;96 (suppl 1):S59-75.
- 6 Foster T, Gillespie K, McClelland R, Patterson C. Risk factors for suicide independent of DSM-III-R axis I disorder. Case control psychological autopsy study in Northern Ireland. *Br J Psychiatry* 1999;175:175-9.
- 7 Malone, K. Is there a biology of suicide? *Ir J Psychol Medicine* 1999;16: 121-2.
- 8 Beck AT, Steer RA. Clinical predictors of eventual suicide: a 5- to 10-year prospective study of suicide attempters. *J Affect Disord* 1989;17:203-9.
- 9 Appleby L, Shaw J, Sherratt J, Amos T, Robinson J, McDonnell R. *Safety first. Five-year report of the National Confidential Inquiry into Suicide and Homicide by People with Mental Illness*. London: Department of Health, 2001.
- 10 Wasserman D, Varnik A, Eklund G. Female suicides and alcohol consumption during *perestroika* in the former USSR. *Acta Psychiatr Scand* 1998;98 (suppl 394):26-33.
- 11 Birckmayer J, Hemenway D. Minimum-age drinking laws and youth suicide, 1970-1990. *Am J Public Health* 1999;89:1365-8.
- 12 Koenig HG, George LK, Meador KG, Blazer DG, Ford SM. Religious practices and alcoholism in a southern adult population. *Hosp Community Psychiatry* 1994;45:225-31.

## Surveillance for infectious diseases in the European Union

*A small European centre may have an important coordinating role*

In 1998 a spirited debate over how to organise surveillance for infectious diseases in the European Union culminated in the decision by the European parliament and council to create a scheme for a decentralised network rather than build a large central European surveillance centre.<sup>1-3</sup> According to the scheme, institutions in member states receive funding to organise European surveillance for one or more related infectious pathogens. Using an approach based on hazard analysis and critical control points, MacLehose and colleagues (p 861) studied how these national networks functioned in five international outbreaks.<sup>4</sup> They identified seven common critical control points and concluded that the networking approach was successful but needed augmentation under a framework of improving existing organisational, financial, and legal uncertainties.

An important contributor to the networks' success is the high level of participation by the national public health institutes, probably in part because these institutions have had a role in running the networks. The networks' start up costs have been low, because existing physical infrastructure in the participating institutions is used. These networks, combined with European infrastructure such as the European programme of intervention epidemiology training, and publications such as *Eurosurveillance* and *Eurosurveillance Weekly*, have accelerated the development of the elements needed for effective control of communicable diseases

### Functions of a European centre for surveillance for infectious diseases

- Coordination, but not delivery, of the networks' activities—for example, helping to organise and fund responses to international outbreaks and national outbreaks that require an international response
- Helping to create broader European strategies for developing national and international capacities for training, applied research, surveillance, and prevention
- Providing technical advice to the European Commission on public health issues
- Managing infrastructure activities such as the European programme of intervention epidemiology training and publications such as *Eurosurveillance*
- Providing a means of external evaluation of national programmes

at the European level.<sup>5 6</sup> For example, surveillance systems and epidemiological response capacities have been improved, surveillance and laboratory methods are increasingly harmonised, published forums for sharing experience of control measures now exist, and a small cadre of highly trained field epidemiologists has been formed.

However, as MacLehose et al's study points out, further development of surveillance for infectious disease in Europe depends on overcoming several limitations in the current networking approach. One limitation is that

*Education and debate*  
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