

TWO METHODS OF ESTIMATING HEALTH COSTS LINKED TO ALCOHOLISM IN FRANCE (WITH A NOTE ON SOCIAL COSTS)

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Abstract — The health costs of alcohol-related problems in France were estimated using two cost evaluation approaches: (1) estimate based on the proportion of cases attributable to alcohol abuse (the alcohol abuse factor); (2) estimate based on prevalence of alcohol abuse for in- and out-patients. For a 10% prevalence of alcohol abuse in the general population, the minimum cost in 1996 was about US\$ 2300 million; for a prevalence of 15% it was US\$ 2700 million. This cost concerns the health disorders that are linked directly or indirectly to alcohol abuse. It did not allow for injuries from accidents caused by alcohol intoxication and undervalued the cost of out-patient care. Based on the prevalence of alcohol-related disorders seen at hospitals, a percentage of the total in-patient and out-patient costs due to effects of alcohol could be estimated. However, this did not permit an estimate of the cost of care in which alcohol abuse was a risk factor only. Based on the available data showing that between 3% and 10% of inpatients have a directly alcohol-related condition, estimates of in-patient treatment costs varied from US\$ 1300 to 2100 million. Among adult out-patients, 20% present with a disorder in which alcohol is a factor or suffer from an alcohol-related illness, which corresponds to a cost of about US\$ 1600 million. Thus, these methods yield minimum year's cost estimated between US\$ 2500 and 3300 million. These costs are high, compared to the low level of financing for the specialized facilities offering treatment to people in difficulty due to alcohol excess, which was US\$ 23 million in that year. As regards social and total costs, estimates from four Western countries have found that about 75% of the total costs of alcohol abuse was attributable to social harm, and 25% to medical costs. Applying this ratio to the French data gives an estimated total cost to French society of about US\$ 13 200 million, i.e. 1.04% of the gross national product.

INTRODUCTION

Alcohol use is a major factor linking health to lifestyle. Excessive alcohol consumption can lead not only to serious health problems, but it can also increase accident rates and is the cause of numerous social problems [Association Nationale de Prévention de l'Alcoolisme (ANAP; National Association for the Prevention of Alcoholism), 1993, 1995; Haute Comité de la Santé Publique (HCSP; French National Committee for Public Health), 1996].

France is notable for its high alcohol consumption, despite a constant decline over the last 30 years. In 1994, the French still consumed 11.7 l of pure alcohol per inhabitant, making them one of the highest consumers in the European Union; an intake which remained stable until 1996 (Baudier and Arenes, 1995; Baudier *et al.*, 1996; Got and Weill, 1998).

Although alcohol use remains a major public health issue, no consistent overall information system is yet available concerning alcohol-related problems and their economic consequences. The French Ministry of Health created a mission, chaired by one of the authors, to assess treatment facilities for persons with difficulties due to alcohol consumption, and part of the work consisted of assessing the health costs of alcoholism. The total cost to the nation of an illness comprised health costs and social costs. Health costs due to alcohol for France in 1996 comprise the cost of general health care for related disorders plus the cost of the specialized health care for alcohol abusers (which is small and easy to evaluate as it is a specific budget item in public accounts). There are two methods by which this can be estimated (see Methods). Social costs are shared between 'private costs' borne by the private sphere (consumers, enterprises, insurances, lost production due to the

poorer health of alcohol abusers, crime, suicide, distress, etc.) and 'public costs' mainly borne by administrations intervening in these domains. In the present paper, we provide estimates of these costs.

METHODS

We estimated the national health cost of alcohol abuse using two approaches: (1) based on the proportion of cases attributable to alcohol abuse: the alcohol abuse factor (AAF); (2) based on the prevalence of alcohol-related complications in hospital in-patients and out-patients.

First method: based on the alcohol abuse factor

We determined the health disorders for which there is unequivocal epidemiological evidence of a link with alcohol abuse, and for which the costs can be identified (Williams, 1988; Guignon, 1994; Rueff, 1995; HCSP, 1996; Tellier, 1996; Rumeau Rouquette *et al.*, 1997; Com-Ruelle, 1998). For each disorder we computed the number of cases attributable to alcohol abuse, using the classical epidemiological measure of 'attributable risk' (Morganstern *et al.*, 1980). Attributable risk is the additional incidence of the disease related to exposure to a definite risk factor, in this instance alcohol abuse, taking into account other possible causes:

$$AAF = P(R - 1) / [1 + P(R - 1)],$$

where P is the prevalence of the risk factor and R the relative risk incurred by an alcohol abuser to contract the disease relative to a non-abuser. This concept of attributable risk is referred to as the AAF (Bernard and Lapointe, 1987). This factor is thus a coefficient that measures the proportion of the frequency and cost of each health disorder considered attributable to alcohol abuse. The same method had been used

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for obesity (Lévy *et al.*, 1995), hypertension (Le Pen and Lévy, 1995), schizophrenia and depression (Le Pen, 1998). Hence, to evaluate the cost of alcohol abuse, we first established the cost in France of each of the health disorders considered (out-patient plus in-patient care), although the costs for medium and long hospital stays could not be included. The AAF will estimate the fraction of those costs attributable to alcohol abuse, the sum of which will yield the total direct medical cost (for alcohol abuse and associated health disorders). This method provides a minimum cost estimate.

Second method: estimate based on the prevalence of alcohol abuse for in- and out-patients

Based on the hospital prevalence of alcohol problems in France (Allemand *et al.*, 1990; Ramirez *et al.*, 1990; Balmès and Daurès, 1995; Com-Ruelle and Dumesnil, 1997; Reynaud *et al.*, 1997), we applied a percentage to in-patient hospital costs. This method allows only the hospitalizations directly linked to alcohol to be taken into account, as we have no attribution factor for hospitalizations due to health disorders for which alcohol abuse is only a risk factor. The same was done for out-patient care, by applying the alcohol abuse prevalence rates in out-patient departments to the total costs of consultations, examinations and prescriptions (ANAP, 1995). To this is added the cost of special facilities, the 158 'Centres Ambulatoires de Soins Alcoolologiques' (CASA; Out-patient Alcohol Treatment Centres) funded by the state (budget item 4717), whose annual cost was US\$ 23 million.

Sources

Epidemiological data. Estimates of the prevalence of alcohol abuse rely on epidemiological surveys, especially the health survey of 1991–1992 (Tellier, 1996). Information on the prevalence of alcohol-related health disorders in France is limited to hospital statistics (Allemand *et al.*, 1990; Ramirez *et al.*, 1990; Balmès and Daurès, 1995; Reynaud *et al.*, 1997; Com-Ruelle, 1998), accident rates (traffic, work, and at home) [Haut Comité d'Etude et d'Information sur l'Alcoolisme (HCEIA; National Committee for Research and Information on Alcohol Abuse), 1985; Barrucand, 1988; Honkanen, 1993; Rueff, 1995; Rumeau Rouquette *et al.*, 1997], and the results of some specific surveys among physicians (Huas *et al.*, 1993). Although the public welfare bodies have no national routine information on alcohol abuse (Rueff, 1995), regional patterns of alcohol abuse are becoming better known through individual consumption surveys (Baudier and Arenes, 1995; Rueff, 1995; Baudier *et al.*, 1996), although uncertainties persist regarding the reliability of declared consumption, which may be distorted by social expectancies, and survey methods may be difficult to compare (Guignon, 1994; Rueff, 1995; Rumeau Rouquette *et al.*, 1997).

Data on relative risks. These were extracted from French and international epidemiological studies based on varying alcohol abuse thresholds (Lewis *et al.*, 1985; Chick *et al.*, 1986; Lang and Darne, 1990; Johnson *et al.*, 1995; Longnecker, 1995). We made a systematic study of these sources and retained only the significant relative risks.

Data on costs of health care. We used the following sources.

(1) For hospital stays, 10-yearly surveys of hospital care giving numbers and durations of hospital stay per type of ward and per type of hospital for each health disorder (Boisguérin,

1996; Mouquet, 1996; Com-Ruelle, 1998). The CREDES study (Com-Ruelle, 1998), conducted in 1991/1992 on the basis of data collected during the second National Survey on Hospitalized Patients, analysed the differences of morbidity and medical resource utilization of hospitalized patients suffering from alcoholism, on an average day of the year.

(2) Data from the national data base for medical care expenditure (PMSI) (Beller *et al.*, 1996; Direction des Hôpitaux, 1996). PMSI has operated for 8 years in France using the 'diagnosis-related groups' (DRG) method, which gives a precise evaluation of the costs of these DRG; and serves as a tool for allotting funds to hospitals. The exhaustiveness of data collection from hospitals ranges from 92% to 98%.

(3) Survey data and regional hospital studies of alcohol abuse (Ramirez *et al.*, 1990; Balmès and Daurès, 1995; Reynaud *et al.*, 1997).

(4) National data on medical consumption published in the national health accounts (HCSP, 1992).

(5) Average price rates per day for hospital stay in 1990 issued by the Health Ministry and updated from a general price index (Beller *et al.*, 1996; Direction des Hôpitaux, 1996).

(6) For out-patient care, the DOREMA panel give the annual number of consultations and visits, and medical prescriptions per diagnosis (Etude permanente de la prescription médicale, 1998).

RESULTS

First method: evaluation based on the alcohol abuse factor

According to the HCSP (Chevalier and Lambrozo, 1990), five million persons are at medical, psychological and social risk through excessive alcohol consumption, i.e. 15% of the population aged over 18 years (high estimate). According to the health survey of 1991–1992 conducted by the French Public Statistical Office (INSEE) (Tellier, 1996), 16% of men consume more than five drinks a day, and 5% of women more than three drinks a day, i.e. 10% of the population are considered as heavy drinkers (low estimate).

Table 1 shows the AAF for an alcohol abuse prevalence of 10% (low-bound estimate). Most of these health disorders stem directly from alcohol abuse, i.e. AAF = 100%. These calculations were repeated for a prevalence of 15% (high estimate).

For indirect consequences, Table 2 shows AAF calculated from relative risks for an alcohol abuse prevalence of 10%. These calculations were repeated for a prevalence of 15%.

Alcohol abuse is strongly implicated in accidents, ranging from 10% of accidents at work, 20% of accidents at home and almost 60% of homicides (Goudal Bourdy, 1988; ANAP, 1993, 1995; Michaud *et al.*, 1996; Rumeau Rouquette *et al.*, 1997).

In France, acute alcohol intoxication (blood alcohol >80 mg/dl) is noted in 30–40% of fatal traffic accidents (Rueff, 1995) and 20% of suicides.

Costs. In this first step of cost estimation, we have retained the out-patient and hospital costs of the various health disorders possibly linked to alcohol, without distinguishing what proportion of the cost is due to alcohol abuse. We have not allowed for injuries arising from accidents (accidents at work, accidents at home, and traffic accidents), because we could not

Table 1. Alcohol abuse factors (AAF) for the most direct consequences of alcohol abuse calculated for an alcohol abuse prevalence of 10%

Health disorder	RR	AAF (%)
Intoxication (no other condition)	—	100
Alcohol dependency syndrome	—	100
Alcohol-induced psychosis	—	100
Cirrhosis (Péquignot <i>et al.</i> , 1978)	51	84
Alcohol-induced liver disease (Benhamou and Erlinger, 1986)	—	100
Hepatocyte carcinoma (Bassendine, 1986)	4	23
Malignant tumours		
Mouth, pharynx	10	47
Larynx (Longnecker, 1995)	5	29
Malignant tumours of the oesophagus	7	38
with additional tobacco abuse (Tuyns <i>et al.</i> , 1977)	44	81
Optic neuritis (Rueff, 1995)	—	100
Alcoholic polyneuritis (Rueff, 1995)	—	100
CNS demyelinating disorders		
Marchiafava Bignami	—	100
Central myelinolysis of the pons (Rueff, 1995)	—	100
Cortical atrophy (Rueff, 1995)	—	100
Non-obstructive myocardiopathy (Komajda <i>et al.</i> , 1986)	7	40
Chronic pancreatitis (Sarles, 1984)	—	80
Fetal alcohol syndrome (Streissguth <i>et al.</i> , 1989)	—	100

RR = relative risk.

estimate the medical costs of such injuries. Likewise, certain health disorders identified as being directly or indirectly linked to alcohol abuse could not be allowed for, either because we had no data for the relative risk, or because we had no representative data at the national level for out-patient and hospital care (e.g. for cortical atrophy or fetal-alcohol syndrome). The total direct costs of health disorders possibly associated with alcohol is thus estimated conservatively as US\$ 10 800 million. Of this, only a fraction of the costs is attributable to alcohol abuse. This fraction is given by the AAF for each health disorder (see Table 1 and Table 2).

The share of alcohol abuse in the costs of each of the health disorders is calculated using the corresponding AAF values for two different prevalence rates. Alcohol-dependence syndrome and alcohol-induced psychosis are a heavy liability, accounting for about 30% of the total cost. The health disorders linked directly to alcohol abuse, i.e. alcohol dependency and alcohol-induced psychosis, cirrhosis of the liver and cancer of the mouth, throat, and oesophagus, imposed a hospital cost in 1996 of between US\$ 1000 and 1100 million according to the prevalence figure selected. Their total cost amounted to between US\$ 1100 and 1150 million. The health disorders for which alcohol is only a risk factor are estimated conservatively at US\$ 1200 to 1500 million.

Summary. For a prevalence of 10% in the overall population, the low estimate of cost in 1996 was about US\$ 2300 million; for a prevalence of 15% it was more than US\$ 2700 million. This cost concerns only the health disorders linked directly or indirectly to alcohol abuse. It does not allow for injuries from accidents caused by alcohol intoxication.

Second method: estimate based on the prevalence of alcohol abuse among hospital in-patients and out-patients

As directly linked illness. According to the CREDES study (Com-Ruelle, 1998), 3% of hospital patients are admitted for

Table 2. Alcohol abuse factors (AAF) calculated from relative risks (RR) for illnesses indirectly linked to alcohol abuse for an alcohol abuse prevalence of 10%

Health disorder	RR	AAF (%)
Malignant breast tumour (Skegg, 1987)	2.5	13
Malignant pancreatic tumour (Raymond <i>et al.</i> , 1987)	3	17
Acute pancreatitis (Huguier, 1987)	—	40
Arterial hypertension (Chick, 1998)	—	10
Cardiovascular accident (Chick, 1998)	3.5	20
Haemorrhagic gastritis (Chick <i>et al.</i> , 1986)	10	47
Schizophrenia (Regier <i>et al.</i> , 1990; Johnson <i>et al.</i> , 1995)	3.3	19
Depression (Regier <i>et al.</i> , 1990; Johnson <i>et al.</i> , 1995)	1.9	8
Anxiety (Regier <i>et al.</i> , 1990; Johnson <i>et al.</i> , 1995)	1.5	5
Antisocial personality (Regier <i>et al.</i> , 1990; Johnson <i>et al.</i> , 1995)	21	67
Psoriasis (Rueff, 1995)	5	29

alcohol abuse. The cost of their hospitalization was estimated at US\$ 1060 million for 1992, i.e. 2.4% of hospital expenditure. Some 85% of the costs were incurred in psychiatric (46%) and medical (39%) treatment. Re-evaluating these costs for 1996, assuming that they still accounted for 2.4% of hospital expenditure, gave a value of about US\$ 1300 million. According to other authors (Niles and McCrady, 1991; Umbricht-Schneiter *et al.*, 1991; Balmès and Daurès, 1995; Reynaud *et al.*, 1997), 5–10% of patients are hospitalized for a problem directly linked to alcohol abuse. Assuming a prevalence of 5%, we obtained a cost of more than US\$ 2100 million for 1995 if this rate is applied to the total hospital expenditure proposed by CREDES and re-evaluated by us ($5\% \times 1300 \text{ million} / 3\% = 2100 \text{ million}$). We can therefore conclude that, using this method, the costs directly attributable to alcohol abuse in hospital patients are between US\$ 1300 and 2100 million, a likely value being about US\$ 1600 million.

With alcohol as a risk factor. According to the CREDES study (Com-Ruelle, 1998) 10% of hospitalized patients are at risk from alcohol abuse. According to other prevalence studies (Niles and McCrady, 1991; Balmès and Daurès, 1995; Reynaud *et al.*, 1997) about 15% of all hospital patients display alcohol use disorders. If this rate is applied to the total hospital expenditure, we obtain a cost of US\$ 8300 million for 1995. However, this cost is clearly not wholly attributable to alcohol abuse, since this is only a risk factor. We do not know what coefficient needs to be applied to obtain the real cost.

Costs attributable to alcohol abuse in out-patient clinics. According to studies conducted among out-patients (Bush *et al.*, 1987; Simon *et al.*, 1991; Huas *et al.*, 1993), 20% of adult out-patients present a risk linked to alcohol consumption, or suffer already from an alcohol use disorder. If this rate is applied to the total out-patient expenditure, the cost for 1995 amounts to US\$ 10 000 million. As above, this cost is not wholly attributable to alcohol abuse. According to Delande (1991), the cost of out-patient care for alcohol abusers can be estimated to be the same as their costs for in-patient care, because alcohol abusers are great consumers of out-patient care. Thus, if the hospital costs are at least US\$ 1600 million

Table 3. Medical costs directly attributable to alcohol abuse in US\$ million (1996) estimated by the method using the alcohol abuse factor (AAF)

Health disorder	Total cost of disorder	AAF (%) at prevalence 10%			AAF (%) at prevalence 15%		
		Out-patient care ^a	Hospital care ^a	Total	Out-patient care ^a	Hospital care ^a	Total
Alcohol abuse							
Intoxication (no other condition)	23.7	0.2	23.5	23.7	0.2	23.5	23.7
Alcohol-induced psychosis/alcohol-dependency syndrome	769.6	64.0	705.6	769.6	64.0	705.6	769.6
Directly linked disorder							
Cirrhosis of the liver	214.4	6.3	173.9	180.1	6.5	182.1	188.7
Malignant liver tumour	57.8	0.5	12.8	13.3	0.7	17.3	17.9
Malignant tumour of mouth, pharynx and larynx	267.8	4.6	73.1	77.7	9.1	143.6	152.7
Malignant tumour of oesophagus	53.4	0.9	19.4	20.3	1.7	36.8	38.5
with tobacco abuse		1.9	41.4	43.3	2.0	44.5	46.5
Optic neuritis	1.5	1.5	—	1.5	1.5	—	1.5
Alcoholic polyneuritis	1.0	1.0	—	1.0	1.0	—	1.0
Non-obstructive cardiomyopathy	5.8	2.3	—	2.3	2.9	—	2.9
Chronic pancreatitis/acute pancreatitis	118.0	6.5	40.7	47.2	6.5	40.7	47.2
Possible associated health disorders							
Malignant breast tumour	285.1	12.3	24.8	37.1	17.0	34.3	51.3
Malignant pancreatic tumour	51.0	0.3	8.4	8.7	0.4	11.3	11.7
Arterial hypertension	2932.0	277.7	15.5	293.2	277.7	15.5	293.2
Cardiovascular accidents	1075.6	85.0	130.1	215.1	114.8	175.6	290.4
Alcoholic gastritis ^b	0.3	0.1	—	0.1	0.2	—	0.2
Schizophrenia	1840.3	8.3	341.4	349.7	11.3	467.2	478.5
Depression	1753.5	57.2	83.1	140.3	85.7	124.7	210.4
Anxiety	1335.1	42.2	24.6	66.8	59.0	34.4	93.5
Antisocial personality	73.5	0.4	48.9	49.2	0.4	54.7	55.1
Total	10 859.3	571.1	1725.7	2296.8	660.9	2075.0	2735.9

^aIncluding psychiatry.^bHealth disorders evaluated conservatively as no hospital costs were available.

for 1995, then, following Delande, the out-patient costs can be put at US\$ 1600 million too.

Summary. This method indicates a total minimum estimate of about US\$ 3300 million, with about US\$ 1600 million for hospital care and about the same for out-patient care. This cost concerns only alcohol abuse declared as an illness. The costs of alcohol abuse as a risk factor cannot be evaluated by this method, because the coefficient that would need to be applied is not known.

DISCUSSION

Preliminary remarks

This assessment was carried out with the greatest rigour in accordance with the available data. However, a large amount of data is missing or to be used with caution. For example, the assessment of the prevalence of abusers and alcoholics, provided by the HCSP, is a consensus value repeated in all studies, but whose source is not given. Similarly, the data on consumption, especially excessive consumption, do not directly correspond to the number of abusers or alcoholics. Therefore, a reliable estimate, covering a sufficiently wide area, of prevalence in the general population would be necessary.

The recent study by Got and Weill (1998) lists the available data and also enables the missing data to be identified. The large amount of missing data has led us to construct only reserved hypotheses, which explains the wide range of possible values given.

The total impossibility of obtaining data that are more reliable and the absence of any information system for health problems linked to alcohol are evidence of the indifference in France concerning this issue.

Comparison of general health care costs of alcohol abuse calculated by the two methods of evaluation

Directly linked illnesses. Using the approach based on the AAF, the hospital costs for 1996 amounted to between US\$ 1000 million (prevalence 10%) and US\$ 1100 million (prevalence 15%). This cost evaluates only health disorders directly linked to alcohol abuse, i.e., intoxication, dependency, cirrhosis, and cancer of the liver, mouth, throat and oesophagus. The costs for medium and long hospital stays are not included. By contrast, the approach based on the prevalence of alcohol abuse gives a total cost of about US\$ 3200 million.

Results with the first approach (AAF) correspond to those from the CREDES survey (Com-Ruelle, 1998). This is the cost which can be the most clearly assessed. In the second approach (prevalence), the hospital costs were about US\$ 1600 million in 1995, for all types of stay. The difference may thus partly derive from what types of hospital stay were included in the calculation of costs. However, this wide discrepancy may also be linked to the estimation of out-patient costs, which are grossly undervalued in the AAF approach: US\$ 83 million against US\$ 1600 million with the prevalence approach.

As a risk factor. The AAF approach estimates the cost of alcohol abuse as a risk factor at US\$ 1250 to 1600 million minimum. Injuries from accidents caused by alcohol use are

not included in this cost, which is therefore heavily underestimated. The prevalence method cannot evaluate this cost, which is accordingly ignored.

The cost of specialized health care for alcoholics. The CASA and the ANPA have a total budget of around US\$ 38 million, allocated by the State under budget item 4717: the part which is directly allocated for treatment is US\$ 23 million, used only in outpatient care, with the rest being allocated to various bodies and for preventive action. These derisory facilities are the State's alibi and disguise the almost complete absence of any health policy for persons in difficulty due to alcohol consumption.

Evaluation of social costs

Whereas direct costs, particularly medical costs, can be estimated, the indirect costs, especially the social costs, remain difficult to assess. In France, there are no reliable studies available concerning social expenditure or costs of the economic consequences of alcohol abuse, hence it is difficult to propose any sound values (Got and Weil, 1998). Even so, since it is reasonable to assume that the social costs of alcohol abuse (Bernard, 1980) make up most of its total cost, this issue can hardly be ignored. As no hard data are available for France, we refer to four studies recently conducted in other countries on this subject. These countries are Germany (Brecht *et al.*, 1996), Canada (Single *et al.*, 1998), the USA (Rice *et al.*, 1991; Heien and Pittman, 1993), and New Zealand (Devlin *et al.*, 1997). A comparative analysis of the structure of the costs generated by alcohol abuse in these four countries helps us to assess the scale of the social costs.

Thus, comparing the studies in these four countries reveals that, although the monetary cost of alcohol abuse varies with the method of calculation used, and the country considered, the structure of the costs is remarkably constant. In Germany, some 74% of the total costs are indirect, i.e. absenteeism (26%), early retirement (22%) and premature death (52%), and most of these costs are borne invisibly by the entire population. The remaining costs, i.e. 26% of the total, are medical costs. In Canada, if the costs incurred by application of the law, which represent 18% of the total cost, are excluded, about 20–25% of the cost derives from health care expenditure, and 70–75% from lost production. Alcohol abuse costs 1.09% of gross national product (GNP). In the USA, the indirect costs of alcohol abuse are also high, compared with the direct costs; some authors propose a figure of 80% of the total cost. The cost total, in 1998, was US\$ 85.5 million, i.e. 1.9% of GNP. In New Zealand, the direct costs make up less than 20% of the total cost estimated generously, or 33% of the total cost estimated conservatively. The total cost is between 1% and 1.57% of the GNP.

If we consider that the direct costs in France are at least US\$ 3300 million, and that they represent 25% of the total cost of alcohol abuse (conservative assumption), the indirect costs will be at least about US\$ 10 000 million. Based on the same assumptions, the total cost of alcohol abuse in France amounts to at least US\$ 13 200 million, i.e. 1.04% of GNP.

There is no reliable French study on this subject. However, mention can be made of the study by the HCEIA, according to which the total cost was said to be between US\$ 16 600 and 33 300 million in 1987, but for which the methodology was imprecise. Another survey was made with EDF-GDF (National

Gas and Electricity Board) employees in 1984–1985 (Chevalier and Lambrozo, 1990), according to which the annual expenditure per person with an alcohol problem came to US\$ 10 100 (including absence from work 74.8%, hospitalizations 23.5%, medical treatment 0.6% and medication 1.1%). If this result, obtained from a sample of the population, can be extrapolated to the population of France, then the cost of alcoholism comes to over US\$ 9000 million a year, even if we consider only the population of 1.5 million alcohol dependants, i.e. leaving aside alcohol abusers.

GENERAL CONCLUSIONS AND COMMENTS

Consideration of these statistics, together with the low level of financing for the specialized facilities offering treatment to people in difficulty due to alcohol consumption (US\$ 23 million) compared to the cost of the overall health care system (over US\$ 2500 million), as well as the absence of any consistent information system, gives clear proof of the lack of interest in the alcohol problem on the part of the French authorities. The funds set aside for these specialized facilities have remained unchanged since 1980, while for the same period, health provision in the fight against drug addiction (state budget item 4719) rose from US\$ 36 to 150 million.

Beyond the high cost of alcohol-related health problems, the work of our assessment mission highlights: (1) the inaccuracy of the currently available information system; (2) the weakness of the specialized facilities, and the lack of specialists inside and outside the hospitals; (3) the insufficient attention paid to alcohol problems, and the inadequate training of both general practice and hospital physicians; (4) the insufficient social concern for a proper policy to fight alcohol problems. This deplorable situation largely derives from the special status enjoyed by alcohol and wine in France, where they symbolize a certain French quality of life. This study, among others, has helped to weaken this special status, prompting the French government, despite strong lobbying from the alcohol trade, to include alcohol and tobacco in the scope of its interdepartmental mission against substance abuse and addiction (MILDT) on 15 July 1999. This step should favour the emergence of a consistent global policy, not only for illegal drugs, but also legal ones, such as alcohol.

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