

# ALCOHOLISM - A SERIOUS HEALTH PROBLEM IN MEXICO

\* Juan Ramón de la  
Fuente

\*\* Haydée Rosovsky

The use and abuse of alcohol by Mexican people is one of the prime concerns in the health area since it is increasingly affecting the productive sectors of society as well as youth with damaging results in the family and the workplace.

Along with other countries with high alcohol consumption, Mexico suffers from a number of problems connected with this phenomenon. The effects of excessive drinking form a chain whose final link is an early, painful and unfortunate death that could have been prevented.

The following article describes the panorama of alcoholism in Mexico, supported by many statistics. The authors, Haydée Rosovsky and Juan Ramón de la Fuente, base their analysis on information about the extent, characteristics and social distribution of the problem. This information is the basis for the implementation of actions that tend to control such an urgent health problem.

---

**Many negative social events that occur under the effects of alcohol, such as accidents, crimes or suicide attempts, are due to persons who drink infrequently but in large quantities**

---

In order to establish appropriate measures to deal with the control of a health problem, it is essential to have reliable and up-to-date information on the magnitude, characteristics and distribution of the problem within a population as well as its changes through time. Excessive alcohol consumption constitutes an important public health problem in Mexico, due to the grave consequences endangering the health of these individuals, as well as due to the impact of the problem on their families, work and society as a whole.

A good number of medical and social problems are typically present in alcoholics and individuals who suffer

from the so-called "alcohol dependency syndrome." Hepatic cirrhosis and alcoholic psychosis are some of the health problems related to chronic and excessive consumption which is characteristic of these persons. Economic deterioration and disintegration of the family are other social effects that may be observed in these afflicted individuals.

Many other drinkers, without being alcoholics, also present important health and social problems related to their way of occasional but excessive drinking. These problems may be acute, as for example in terms of episodes of intoxication, accidents and acts of violence.

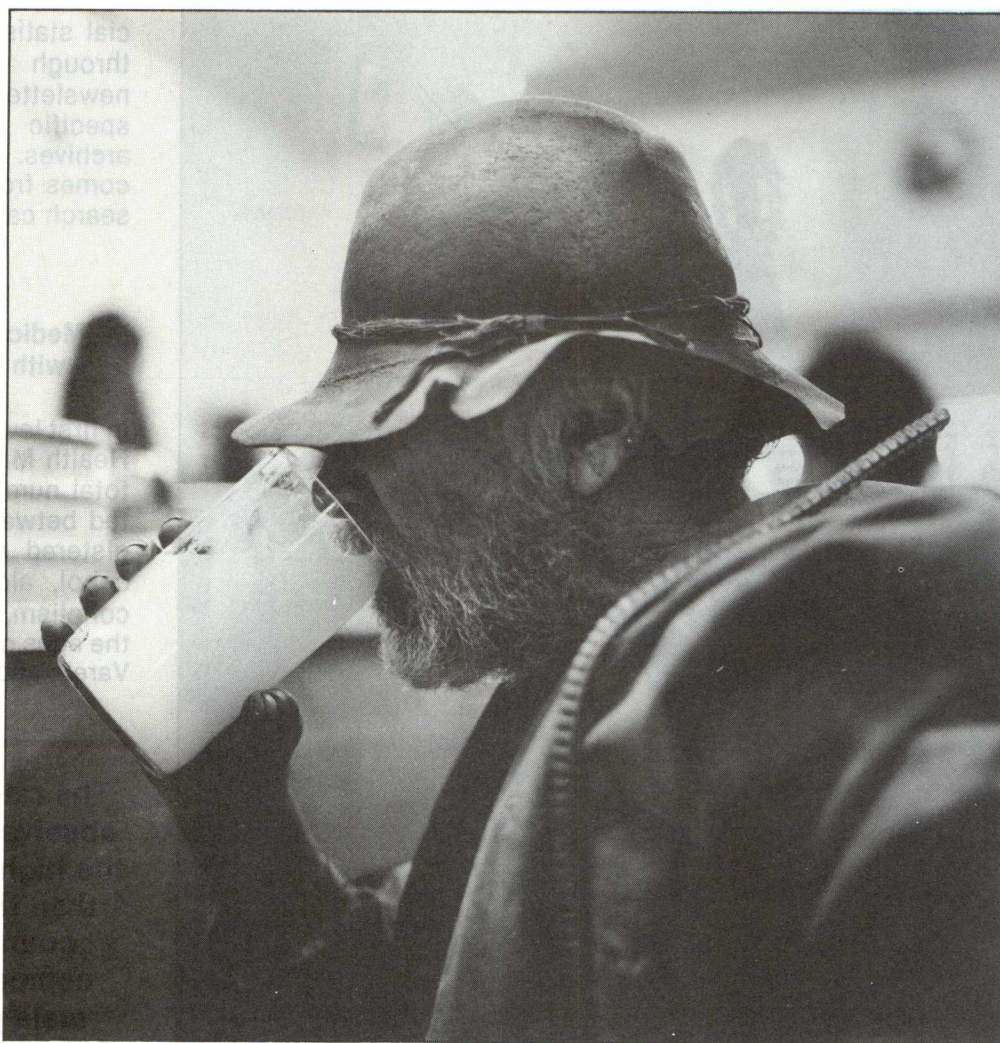
It is essential to take these different types of drinkers and the different medical and social problems concomitant with their type of alcohol intake into account, both to obtain a pro-

---

\* Co-ordinator of Scientific Research, UNAM.

\*\* Head of the Research Department in the Mexican Institute of Psychiatry





"To your health..." Photo by Marco Antonio Cruz/Imagenlatina

per diagnosis of the alcohol problem in society, as well as to make decisions effectively.

This is particularly important in a country such as Mexico due to the different patterns of consumption prevalent in the population found in studies (Medina-Mora, de la Parra and Terroba, 1980; Medina-Mora, Rascón, Zavala and Ezbán, 1986; Calderón, Campillo and Suárez, 1980). According to these studies, there are a good number of abstainers, specially among women in rural environments,

while among drinkers, one group consumes alcohol frequently and in high quantities, reporting symptoms related to dependency. These individuals may be identified as those who present or may come to present pathological conditions derived from consumption and dependency, such as hepatic cirrhosis.

Another, much more numerous group among drinkers reports a type of infrequent ingestion but in high quantities, which implies that each episode of consumption results practically in drunkenness. Many negative health and social events that occur under the effects of alcohol, such as accidents, crimes or suicide attempts, are present in individuals who frequently correspond to this last ingestion pattern.

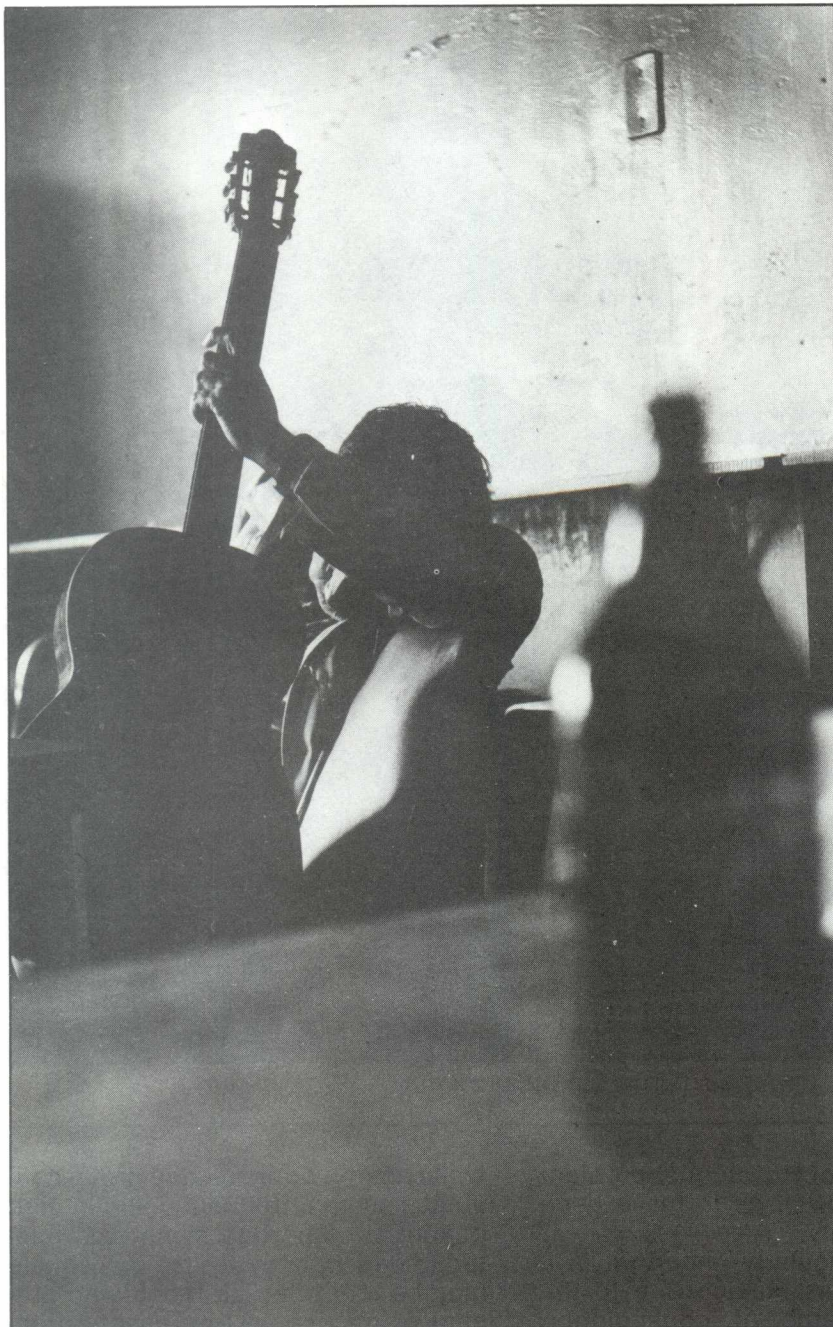
Data on health and social problems related to alcohol consumption in Mexico are presented in this study, on those identified as alcoholics, as well as on other problem drinkers. A part of the data comes from the Health Services records and from other offi-

---

**According to data from three emergency hospitals in Mexico City, 10.7% of patients attended between 1980 and 1984 were, to some extent, under the effects of alcohol**

---





"When the music's over..." Photo by Marco A. Cruz/Imagenlatina

cial statistics and was located both through institutional annuals and newsletters, as well as by means of specific searches in institutional archives. Another type of information comes from specific studies and research carried out in Mexico.

### Medical Problems Associated with Alcohol Consumption

In first level health care centers of the Health Ministry, less than 2% of the total number of consultations reported between 1975 and 1983 were registered as ailments related to alcohol, alcoholic psychosis and alcoholism, mainly in males between the ages of 15 and 44 (Mas, Manrique, Varela and Rosovsky, 1986).

**The rate of hepatic cirrhosis observed in Mexico is among the highest in America, higher than that reported in some countries in Europe and comparable to that for the male population in Spain**

In data on hospitalizations from the Mexican Institute of Social Security (IMSS), it was found that of the total number of patients interned in 1983, 3.4% corresponded to alcohol-related ailments, especially alcoholic cirrhosis at 2.6% (Mas, Manrique and

Chart 1

### Mortality Rates of Chronic Liver Ailments in Different Countries by Sex for 1983.

(Per 100 000 Inhabitants)

Country	Males	Females	Total
Canada	12.8	6.1	9.4
Cuba	6.7	5.7	6.0
U.S.A.	15.4	8.1	11.7
France	36.8	15.2	25.7
Italy*	47.3	19.8	33.2
Spain**	32.1	13.0	22.4
Uruguay	14.5	4.5	9.4
Venezuela	10.1	3.2	6.6
México	34.3	9.7	22.1

Source: World Health Statistics, WHO, 1986.

Compiled by the Alcohol Information and Documentation Center, Mexican Psychiatry Institute, 1987.

\* data for 1981

\*\* data for 1980



Varela, 1985). For that same year, in the Institute of Social Services and Security for State Workers (ISSSTE), 2.4 % of the total number of hospitalizations corresponded to alcohol-related ailments, with a notable percentage of 1.7% for cirrhosis. In Health Ministry psychiatric hospitals, the percentage of alcohol-related cases is higher, representing 8.1% of all ailments in 1978; notable among these are ethylic alcohol addiction, delirium tremens and alcoholic hallucinations.

According to information from the Health Ministry's General Directorate of Mental Health (Gutiérrez and Tovar, 1984), among men who attended out-patient psychiatric consultations between 1978 and 1980, alcoholism represented 15.4 % of the diagnoses between those of 35 to 44 years of age and 16.2% among those from 45 to 54 years of age. According to the same study, in cases of hospitalizations for psychiatric problems, alcoholism represented 21.1% in the 45 to 54 year age group, and 17.3% in the 55 to 64 year sector.

In an internal medical service for men in a general hospital in the provinces (Esquivel, 1982), 36% of the

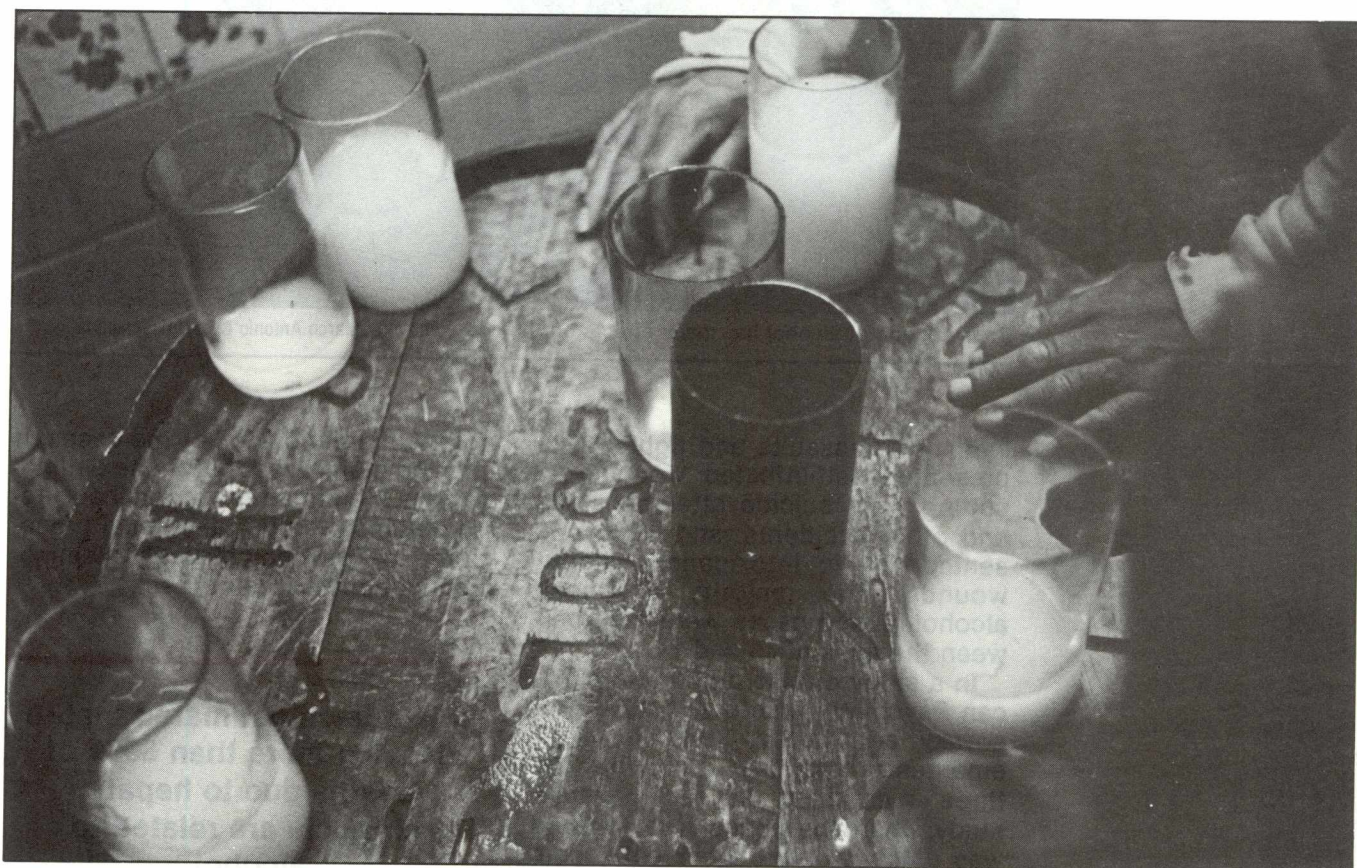
500 recorded internments were diagnosed as alcoholics, of which 80% were between the ages of 20 to 50 years and the main reasons for internment were digestive tube bleeding and liquid retention with important ascites, complications related to ethanol dependency. Clinical and laboratory data indicated hepatic insufficiency in 31.6 % of these alcoholics and the diagnosis of hepatic cirrhosis was established through histological study in 14%; alcoholism was frequent in the family background of these individuals.

According to archival data from three emergency hospitals in Mexico City (Mas et al., 1986) 10.7% of patients attended between 1980 and 1984 were, to some extent, under the effects of alcohol. Among these, 4.7% had suffered intentional

---

**Cirrhosis is the principal cause of death in the male population between 35 and 54 years of age in Mexico**

---



Pulque - a fermented drink made from the maguey plant. Photo by Marco Antonio Cruz/Imagenlatina





Consumption of alcohol has many effects on the body. Photo by Marco Antonio Cruz/Imagenlatina

wounds in assaults and fights, 22% presented self-inflicted wounds resulting from suicide attempts, falls and other accidents, and 3.5% presented ethylic intoxication without wounds. The majority of these alcohol-related cases were men between the ages of 15 and 34.

In a study carried out by the Mexican Psychiatry Institute in 1986 (Rosovsky and López, 1986) in eight emergency services, including the three mentioned in the previous study, where the alcohol level in blood was estimated through breath tests on all subjects older than 15 years of age, positive concentrations were

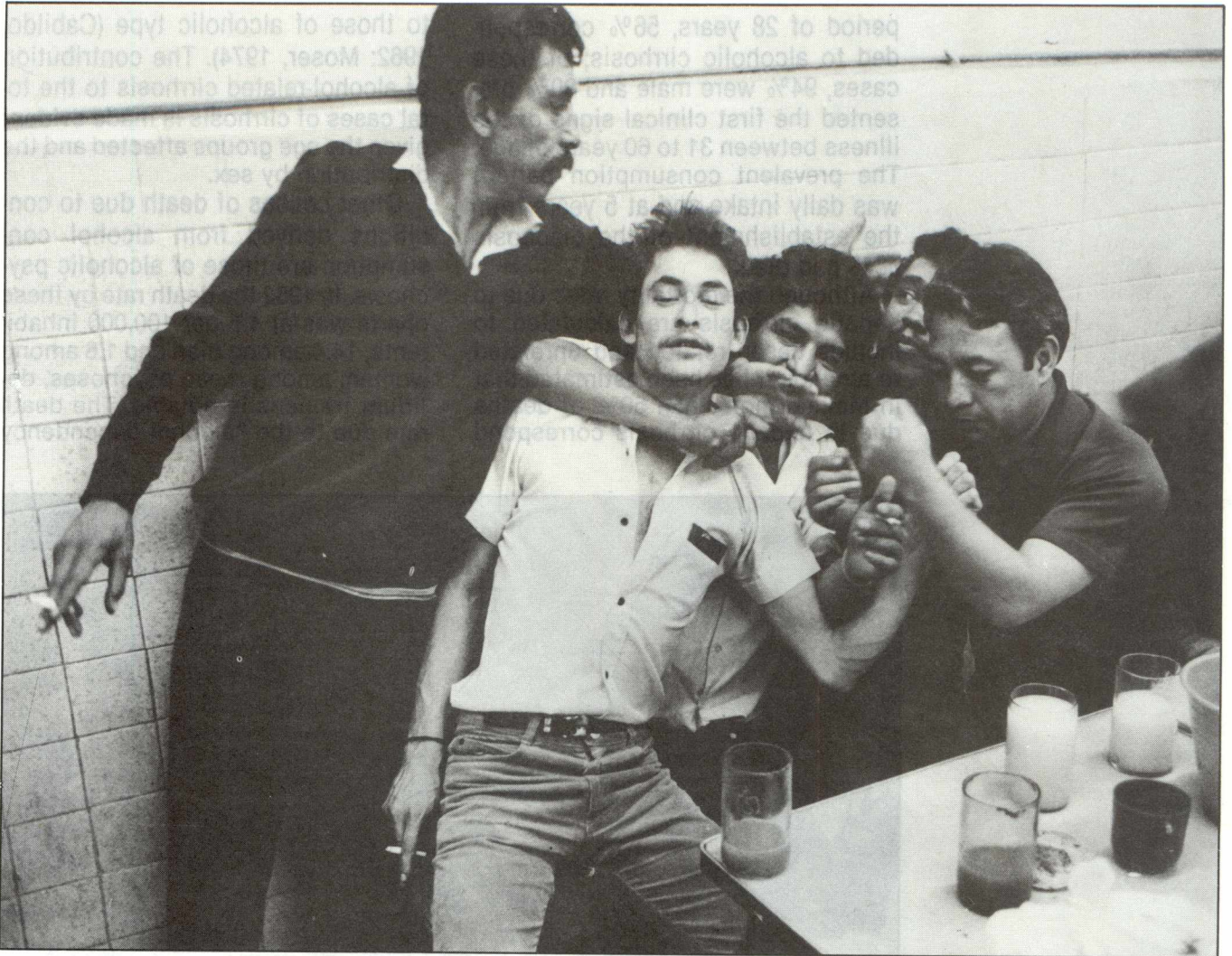
found in around 25% of the cases; it may be mentioned that these estimates are significantly higher than those obtained through the usual procedures of psycho-physical examination without laboratory test.

---

**It has been estimated that in Mexico more than 50% of deaths due to hepatic cirrhosis are related to alcohol**

---





"All for one and one for all". Photo by Marco Antonio Cruz/Imagenlatina

**In a comparative study between Mexico and the United States, 12% of subjects in Mexico consumed more than 40 grams of ethanol daily, while in the U.S. this figure stood at 16%**

The majority of alcohol-related cases corresponded to emergencies involving wounds in male subjects and 51% were under the age of 30.

#### **Hepatic Cirrhosis and Alcoholic Psychosis**

Within the estimate of alcoholism, death rates due to hepatic cirrhosis are considered classic indicators of the problem. The rate of cirrhosis observed in Mexico is among the highest in America, higher than that

reported in some countries in Europe and Oceania and comparable to that for the male population in Spain (Chart 1).

In Mexico, mortality due to cirrhosis is one of the 10 primary causes of death in the general population and the principal cause of death in the male population between 35 and 54 years of age. Even though these death rates have remained stable through the years in Mexico at around 20 out of every 100,000 inhabitants, (Chart 2), marked regional variations are evident, especially in states that are producers and consumers of pulque (a fermented drink made from the juice of the maguey plant.)

Differences by sex reflect the variations found in consumption patterns in the general population among men and women and are congruent with information on morbidity such as that reported by a study of the National Nutrition Institute (Dajer et al., 1978). There it is indicated that of patients with hepatic cirrhosis treated over a



period of 28 years, 56% corresponded to alcoholic cirrhosis; of these cases, 94% were male and 80% presented the first clinical signs of the illness between 31 to 60 years of age. The prevalent consumption pattern was daily intake and at 5 years from the establishment of the diagnosis 56% had died.

Although the mortality rates due to hepatic cirrhosis are calculated to include cases related and unrelated to alcohol, it has been estimated that in Mexico more than 50% of deaths due to hepatic cirrhosis correspond

to those of alcoholic type (Cabildo, 1962; Moser, 1974). The contribution of alcohol-related cirrhosis to the total cases of cirrhosis is made evident given the age groups affected and the distribution by sex.

Other causes of death due to conditions derived from alcohol consumption are those of alcoholic psychosis. In 1982 the death rate by these charts was at 4.5 per 100,000 inhabitants, 14.4 among men and 1.6 among women; among these psychoses, delirium tremens is notable. The death rate due to the "alcohol dependency



Pulque is consumed by young and old- in small quantities it is said to be a good tonic. Photo by Marco Antonio Cruz/Imagenlatina



Chart 2  
Mortality from Hepatic Cirrhosis in Mexico, 1956-1983

Year	Rate*
1956	22.1
1961	21.4
1966	19.5
1971	21.1
1976	19.7
1981	20.9
1982	21.8
1983	22.1

\*Per 100 000 inhabitants

Source: Compiled by the Statistics Center, Budget and Planning Ministry.

syndrome" in 1982 was 3.3% and 91% of cases corresponded to men (Alcohol Information and Documentation Center, Mexican Psychiatry Institute).

#### Prevalence of Alcoholism

Based on mortality rates for hepatic cirrhosis and according to the Jellinek formula, it is estimated that between 1956 and 1971, 5% to 7% of the population in Mexico over the age of 20 were alcoholics (Bustamante et al., 1978). These estimates may not be viewed as definitive given that Mexico does not have sufficient information on a national level to be able to apply this formula correctly. Nevertheless, there is a consistency between the above-mentioned percentages and those found in some studies, which report around 8% alcoholics in the populations studied, even when utilizing incompatible methodologies and indicators (Bustamante et al., 1978; Cabildo, 1968; Fromm and Macobi, 1973).

As for the prevalence of alcoholism in hospital populations, Mexico presents percentages of male patients (30%) similar to those reported by studies in England (29%) and the Uni-

ted States (27%) and among the lowest for women (5.2%) (De la Fuente et al., 1982).

In archival data from an alcoholic attention service in Mexico City, it was found that 90.4% of the population attended between 1970 and 1985 were men and 70% were under the age of 45 (Hospital General de la Secretaría de Salud, 1985).

#### Clinical Research

As for clinical research, a project coordinated by the World Health Organization in different countries proposed estimating alcohol sensitivity indicators through metabolism; type I dihydrogenase acetaldehyde enzyme deficiencies were found in an important part of the Asiatic population and this deficiency has a close correlation with the redness syndrome, "flushing," after drinking, which produces an unpleasant effect in individuals who suffer from this and results in a diminution in consumption, constituting a type of protective factor against the development of the dependency syndrome. According to these studies, no evidence was found of this deficiency in the population studied in Mexico nor in other countries included in the study, such as India, Australia and the Soviet Union (De la Fuente et al., 1986).

In another work on the relation between depression and alcoholism through biological indicators such as corticosteroids, 53 chronic alcoholics were studied. Depression itself did not seem to explain the adrenocortical activity observed in alcoholics. The patients diagnosed independently as probable depressives, by way of scales such as the Beck inventory, the MMPI and the Hamilton scale,

---

**In Mexico, mortality due to accidents, poisoning and violent acts has gradually increased over the years, and particularly affects the male population from 15 to 44 years of age**

---





The adult male population is the highest consumer of alcohol, and is most exposed to death by violence, accidents and cirrhosis. Photo by Marco A. Cruz/Imagenlatina

---

**The role played by alcohol consumption as a risk factor in events such as accidents and violent acts has awoken growing concern in recent years among researchers of the problem and health authorities**

---

did not obtain high percentages in the measurements of adrenocortical activity when this was compared with patients who were not depressed, for whom alcohol could be more responsible for this adrenocortical activity (De la Fuente et al., in press).

In research that is being carried out in different countries coordinated by the World Health Organization and the objective of which is the development and application of screening effects for drinking risk detection, it was found that approximately 20% of the men in a population attending

family medical services, drink dangerously (Campillo, 1987).

In a comparative study between Mexico and the United States (De la Fuente, 1986) the presence of symptoms associated with dependency in a clinical population according to the quantity of daily consumption was estimated. In the sample studied in Mexico, there was a prevalence of 12% of subjects consuming 40 or more grams of ethanol daily, as opposed to 16% in the United States, and the Mexican population presented consistent signs such as drinking in the mornings, guilt feelings and remaining in an inebriated state.

**Social and Medical-Social Problems Related to Alcohol Consumption**

Although alcoholism seems to constitute an important risk factor in the occurrence of suicidal behavior, even excessive consumption in non-dependent individuals seems to precipitate this conduct. The number of cases of suicide in Mexico is low



---

**According to a women's support group, 84% of family disagreements and 82% of separations are caused by alcohol**

---

when compared with that of other countries, but there seems to exist an important under-reporting of this phenomenon, mainly due to cultural reasons.

Contrary to what is indicated by the natural history of this phenomenon, in Mexico there are more consummated suicides than failed attempts, which surely is related to the limitations of the numbers reported.

"Alcohol intoxication" has represented, among cases of suicide, around 5% through the years (Chart 3). The cases of consummated suicides under the effects of alcohol are more frequent among men in 1984, 5.4% of the men took their lives as a result of ethylic intoxication while among women it was only 0.6% (Alcohol Information and Documentation Center, Mexican Psychiatry Institute, 1985). Nevertheless, the role played by alcohol seems to be more important than indicated by the records, and in research carried out by the Mexican Psychiatry Institute in the Forensic Medicine Service (Terfroba, Saltijeral and Del Corral, 1986), levels of alcohol above 100 mg were found in blood samples in 17% of the autopsied suicides.

#### **Accidents and Crimes**

The role played by alcohol consumption as a risk factor in events such as accidents and violent acts has awoken growing concern in recent years among researchers of the problem and health authorities.

In Mexico, mortality due to "accidents, poisoning and violent acts" has gradually acquired greater importance in the panorama of deaths: in 1971 the death rate due to these causes was 68 for every 100,000 inhabitants, rising to 98 in 1981, principally affecting the male population from 15 to 44 years of age (Alcohol Information and Documentation Center, Mexican Psychiatry Institute).

The role of alcohol consumption as a risk factor in these events has been extensively reported in international

literature, especially for traffic accidents. In Mexico, data on this is scarce, but in a study carried out in 1974 by the Forensic Medicine Service of Mexico City on cases of violent deaths, elevated alcohol concentrations were found in 57.6% of the 1600 blood samples analyzed. In these cases, 35% had died in traffic accidents, mainly by being run over by cars and in a smaller proportion from car crashes. The alcohol concentrations found ranged from 90 to 250 mg of ethanol per 100 ml. of blood (García, 1985).

Another study reports that of the traffic accidents that occurred in Mexico City in 1968, 8% involved someone in a state of inebriation, a proportion that rose to 15.85% in 1983 (Jiménez, 1985; Silva, 1972) (Figure 1).

According to judicial authorities, in 1983 of all of the "attacks on routes of communication" that occurred in Mexico City, 85% were recorded as involving someone in a state of inebriation (Data from the Federal District's Attorney General's Department, 1985). As for traffic accidents on roads and highways under federal jurisdiction, around 3.5% occurred with one of the parties under the effects of alcohol.

As for violent and criminal behavior, according to the Attorney General's Office, in 1975 17.5% of the criminals sentenced in Mexico were found to be under the effects of alcohol; this proportion registered increases in subsequent years reaching 24.7% in 1982.

---

**The Mexican Social Security Institute estimated that 18% of accidents on the job are related to alcohol intake**

---

In a study carried out in 1984 by the Mexican Psychiatry Institute in a Research Agency of the Government Attorney's Office (Rosovsky and López, 1986), cases in which alcohol was detected by the authorities, which represented 15% of the incoming cases, were compared with those detected by the researchers through self reporting, which was 39%. The greater part of the subjects who said they had consumed alcohol when they committed their crime were men



between 15 to 34 years of age. The prevalent socio-economic level was lower middle and lower class, and the principal reasons for detention were crimes such as disturbing the peace, damages to alien property, ingestion of alcoholic beverages on the road, infliction of wounds, attacks on routes of communication in a state of inebriation, and robbery. 65% of these "cases under the influence of alcohol" manifested that they were inebriated when the event occurred and 14% reported they had experienced previous problems with the police and other authorities due to their way of drinking and 39% had problems with their family.

**A child care institution reported that alcoholism occupies the second place among causes of aggression against children, being present in 19% of the cases studied**

**Impact on the Family and Work**

Other social effects of alcohol consumption are presented in the family and in the work-place. According to official statistics, approximately one in every thousand divorces are caused by the spouse's drinking problem, but there are reasons to believe that alcohol plays a more important role in family desintegration, but that its impact has been seen as limited due to cultural factors and the nature of the recording system.

According to a women's support institution, it is indicated that 84% of

family disagreements and 82% of separations are caused by alcohol (Barba and Arana, 1985).

In cases studied in a child care institution and as part of a prevention program against child abuse, alcoholism occupied the second place as the cause of aggression against children, being present in 19% of the cases (diagnosis made by the National Program against Alcoholism and Abuse in Consumption of Alcoholic Beverages, 1985).

Repercussions in the labor area are multiple in addition to the fact that alcoholics and excessive drinkers suffer from incapacities and many die, at ages considered to be of great productivity, and furthermore, work accidents are frequent, as well as absenteeism and job loss due to alcohol. According to the Mexican Social Security Institute, it has been estimated that 18% of work accidents are related to alcohol intake, representing great material and human losses (Campillo and Medina, 1978). It has been reported, in addition, that alcohol consumption is responsible for the loss of thousands of work hours among those with medical coverage from the Mexican Social Security Institute (Gamiochipi, 1976); another study indicates that in work absenteeism, 12% may be attributed to the effects of the "day after" (Menéndez and Di Pardo, 1982).

**Discussion**

From the information presented it may be inferred that excessive alcohol consumption and its effects on health and society constitute important problems in Mexico.

As was mentioned, mortality due to alcohol-related hepatic cirrhosis and physical injuries are medical problems of outstanding magnitude.

*Chart 3*  
**Suicides and Alcohol**

	Total Suicides	% with Alcohol
1970	740	6 %
1975	893	5 %
1980	672	5 %
1982	843	6 %
1984	1 124	4.7%

Source: Compiled by the Alcohol Information and Documentation Center, Mexican Institute of Psychiatry, with data obtained from the Statistical Reports on Road and Highway Accidents, Communication and Transport Ministry, 1970-1984.





After the euphoria... Photo by Marco Antonio Cruz/Imagenlatina

These problems are presented in different populations of drinkers: one, of chronic heavy drinkers, above 35 years of age and the other of younger individuals who consume alcohol occasionally but in excessive quantities. This implies the need to develop particular preventive strategies aimed at specific risk groups, also taking regional variations into account.

Within the realm of social problems, it was found that crimes and traffic accidents that occurred under the effects of alcohol are growing problems frequently manifested in subjects with a pattern of occasional but excessive consumption.

The data available permits the formation of a general panorama of the problem, nevertheless, it is necessary to point out certain limitations in the data. On the one hand, data from official statistical records are not easily accessible and they are not sufficiently updated. Data are often omitted from these records that could be of use in delving deeper into determining and conditioning factors of the alcohol problem, as socio-demographic characteristics.

This situation responds both to routine procedures of detection of alcohol presence in events, as well as to the way in which the data are elaborated and disseminated. In this way, for example, there is often no clear distinction made between alcohol-related and non-alcohol-related deaths due to hepatic cirrhosis, in addition to the fact that in many regions medical certification of death is not available. In accidents and physical injuries, laboratory proofs are not routinely used to estimate alcohol levels in the blood of those involved. This is carried out in the case of violent deaths, although the results are not very accessible.

In instances of crimes committed under the effects of alcohol, relevant data regarding the characteristics of the events and of those involved are not available. Neither may one rely on even epidemiological information on the role of alcohol in other important health problems such as certain types of cancer (of the mouth and esophagus, for example) and pregnancies affected by alcohol consumption. Data available is insufficient for specialized studies of social aspects, such as effects in the work place and family.

This entire panorama makes evident the need to improve statistical records through a greater awareness of the problem of alcohol on the part of those responsible as well as through an effective coordination between authorities and researchers and experts in the problem. As has been seen, there are important differences between the data obtained from records and those generated by specific research. Relying on better recording systems would permit the improvement on an international level of comparability of indicators of the problem, as well as a saving in research resources which could then be oriented toward a deeper exploration of other aspects of the problem.

It is necessary to continue and to reinforce the cooperation that exists between Mexico and the United States both in terms of improving existing recording systems as well as in the development of research into problems such as those mentioned, utilizing comparable methodologies that would allow for a better assessment of the impact of alcohol consumption in both societies.



## REFERENCES:

- Barba. J. & Arana. M. (1985). Utilización y limitaciones de los indicadores para el estudio del alcoholismo en México. In Molina Piñero V. & Sánchez Medal L. (Eds). *El Alcoholismo en México*. México: Fundación de Investigaciones Sociales A.C.
- Bustamante. M. et al. (1978). Alcoholismo. *Gaceta Médica de México*. 107(3). 213-226.
- Gabildo. H. (1968). Encuesta sobre hábitos de ingestión de bebidas alcohólicas. *Revista de Salud Pública de México*. 11(6).
- Gabildo. H. (1962). Significación social a la cirrosis hepática y bases de la campaña para su prevención, diagnóstico oportuno y tratamiento adecuado. *Revista de Gastroenterología de México*. 27(161), 417-426.
- Campillo. C. (1987). *Identificación y tratamiento de personas cuyo consumo de alcohol pone en peligro su salud. Fase II Estudio Internacional coordinado por la OMS. actualmente en proceso*. México, D.F.: Instituto Mexicano de Psiquiatría.
- Campillo. C. & Medina. E. (1978). Evaluación de los problemas y de los programas de investigación sobre el uso del alcohol y drogas. *Salud Pública de México*, 20. 733.
- Centro de Información y Documentación en Alcohol del Instituto Mexicano de Psiquiatría (1985). *Elaborado con datos obtenidos de las Américas Estadísticas de Accidentes Viales en Caminos de Jurisdicción Federal*. México, D.F. Author.
- Centro de Información y Documentación del Instituto Mexicano de Psiquiatría (1987). *Elaborado con datos obtenidos de World Health Statistics*. 1986 México, D.F.: Author
- Centro de Información y Documentación en Alcohol del Instituto Mexicano de Psiquiatría (N.D.). *Elaborado con datos obtenidos del INE-CRI*. SPP. México, D.F.: Author
- Diagnóstico del Programa Nacional Contra el Alcoholismo y el Abuso del Consumo de Bebidas Alcohólicas (1985). México, D.F.: Programa Nacional Contra Alcohol.
- Dajer. F., et al. (1987). Consideramos sobre la epidemiología de la cirrosis hepática alcohólica en México. *Revista de la Investigación Clínica*. 30. 13-28
- Hospital General de la Secretaría de Salud (1985). *Datos proporcionado por el Centro de Atención al Alcohólico*. México, D.F.: Author
- Procuraduría General de Justicia del Distrito Federal (1985). México D.F.
- De la Fuente. J. R. et al. (1982). Detección precoz de alcoholismo en una población hospitalaria. *Revista Investigación Clínica* (México). 34,1-6.
- De la Fuente, J. R. et al. (1983). The hypothalamic-pituitary-adrenal axis in alcoholism. *Alcoholism: Clinical and Experimental Research*. 7(1).
- De la Fuente J.R. et al. (1986). Biological Study of alcohol dependence syndrome with reference to ethnic differences. *Report of a WHO collaborative study*. Instituto Mexicano de Psiquiatría. México, D.F.
- De la Fuente, J. R. et al. (in press) *Adrenocortical activity and depressive symptoms in alcoholics*.
- Esquivel, F.A. (1982). El enfermo alcohólico. In Molina Piñero V. & de Sánchez Medal L. (Eds). *El Alcoholismo en México* volume I México, D.F.: Fundación de Investigaciones Sociales. A.C.
- Fromm. E. & Maccobi. M. (1973). *Sociopsicoanálisis del campesino Mexicano*. México, D.F.: Fondo de Cultura Económica.
- Gamiochipi. L. (1976). Mesa redonda alcoholismo. *Revista Facultad de Medicina*. UNAM. 19.6
- García Rojas. F. (1985). Alcoholismo y violencia. In Molina Piñero V. & Sánchez Medal L. (Eds). *El alcoholismo en México*. Volume I. (pp. 211) México: Fundación de Investigaciones Sociales. A.V.
- Gutiérrez. A. & Tovar. H. (1984). La vigilancia epidemiológica de las alternaciones mentales. *Revista de Salud Pública de México*, 26(5). 464-483.
- Jiménez. N. (1975). Muertes en hechos de tránsito. Estudio epidemiológico del comportamiento del fenómeno en el D.F. *Revista de Salud Pública de México*. 17(6).
- Leibach. W. (1974). *Recent advances in alcohol and drinking problems*. New York: John Wiley & Sons.
- López. J. L. & Rosovsky. H. A. (1986. Noviembre). *Problemas relacionados con el consumo de alcohol: Urgencias hospitalarias*. Trabajo presentado en la III Reunión de Investigación y Enseñanza. Instituto Mexicano de Psiquiatría. México, D.F.
- Mas, C., Manrique, A., Varela, C., & Rosovsky, H. (1986). Variables médicas y sociales relacionadas con el consumo del alcohol en México. *Revista de Salud Pública de México*. 28, 473-479.
- Mas. C. Manrique, A., & Varela, C. (1985). *Banco de datos del Instituto Mexicano de Psiquiatría*. México, D.F.
- Mas. C. y col. (1986). Detección de problemas relacionados con el consumo de alcohol en 4 hospitales de urgencias del D.F. *Revista de Salud Mental*. 9(4). 10-14.
- Medina-Mora, M.F., de la Parra. A., & Terroba. G. (1980). El consumo de alcohol en la población del D.F. *Revista de Salud Pública de México*, 22(3). 281-288.
- Medina-Mora. M. E. Rascón, M. L. Zavala. G. & Exbán. M. (1986). Patrones de consumo de alcohol y normas relacionadas con dicho consumo en una población de Michoacán. México. *Salud Mental*. 9(4). 87-91:
- Menéndez, E. & Di Pardo, R. (1982). Alcoholismo I: Características y funciones del proceso de alcoholización. *Cuadernos Casa Chata*, CIE-SAS. México. D.F.
- Moser. J. (1974). *Problems and programmes related to alcohol and drug dependence in 33 Countries*. Geneva. World Health Organisation.
- Rosovsky, H. & López, J. L. (1986). Violencia y accidentes relacionados con el consumo de alcohol en la población registrada en una agencia investigadora del Ministerio Público del D.F. *Salud Mental*. 9(3). 72- 76.
- Schmidt. W. & Popham, R. (1975-1976). Heavy Alcohol consumption and physical health problems: A review of the epidemiological evidence. *Drug and Alcohol Dependence*. 1, 27-50.
- Silva. M. (1972). Alcoholismo y accidentes de tránsito. *Revista de Salud Pública de México*, 14(6).
- Terris. M. (1967). Epidemiology of cirrhosis of the liver: National mortality data. *American Journal of Public Health*. 57(12).
- Terroba, G., Saltijeral. T. & Del Corral, R. (1986). El consumo de alcohol y su relación con la conducta suicida. *Revista de Salud Pública de México*, 28. 489-494.