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**EXPERT COMMITTEE ON  
MENTAL HEALTH**  
**ALCOHOLISM SUBCOMMITTEE**

**Second Report**

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**EXPERT COMMITTEE ON MENTAL HEALTH  
ALCOHOLISM SUBCOMMITTEE**

**Second Session**

*Copenhagen, 15-20 October 1951*

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**EXPERT COMMITTEE ON  
MENTAL HEALTH**

**ALCOHOLISM SUBCOMMITTEE**

**Second Report<sup>1</sup>**

**1. Introduction**

The Alcoholism Subcommittee of the Expert Committee on Mental Health held its second session in Copenhagen from 15 to 20 October 1951. Dr. G. R. Hargreaves, Chief of the Mental Health Section, conveyed the greetings of the Director-General of the World Health Organization. The subcommittee unanimously elected Dr. M. Schmidt as Chairman, Dr. R. Fleming as Vice-Chairman, and Professor I. Matte Blanco as Rapporteur.

The agenda of the second session concentrated more on practical and specific aspects of the problem of alcoholism in contrast to the more general and theoretical considerations of the first session.<sup>2</sup> The subcommittee regards as one of the most urgent matters recommendations on the organization of rehabilitation facilities for alcoholics. Without prejudice to the preventive aspects of a programme, the subcommittee feels that progress in the various phases of the problem of alcoholism is most feasible only after the large number of alcoholics throughout the world has been considerably diminished through a large-scale rehabilitation effort.

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<sup>1</sup> The Executive Board, at its ninth session, adopted the following resolution :  
The Executive Board,

Having considered the report of the Alcoholism Subcommittee of the Expert Committee on Mental Health on its second session ;

1. THANKS the members of the subcommittee for their work ;
2. AUTHORIZES publication of the report ;
3. NOTES the recommendation in section 5 that a survey of alcoholism should be undertaken in one of the proposed health demonstration areas, and
4. REQUESTS the Director-General to study the possibility of undertaking such a survey in co-operation with the government concerned.

(Resolution EB9.R48, *Off. Rec. World Hlth Org.* 40, 16)

<sup>2</sup> See *World Hlth Org. techn. Rep. Ser.* 1951, 42.

The subcommittee also wishes to point out that the treatment of alcoholism contains an element of prevention, particularly through the favourable publicity which inevitably develops around such efforts. When the public understands the disease nature of alcoholism, a much greater acceptance of preventive measures may be expected.

## 2. Treatment Facilities

The deliberations of the subcommittee suggest that public care of alcoholics must proceed on four levels. These treatment levels are determined by the phase to which the alcoholic process has progressed and the degree of psychiatric involvements.

Broadly, the following levels may be distinguished :

- (a) Early alcoholism, and alcoholism without gross neurotic origins.
- (b) Alcoholism at the middle stages of the process, and alcoholism with primary neurotic characteristics.
- (c) Alcoholism in the chronic stage, and alcoholism with psychotic involvements.
- (d) Alcoholism with apparently irreversible deterioration.

### *Outpatient clinics*

The first level, namely, the treatment of early alcoholism and of alcoholism without serious psychiatric involvement, requires an outpatient clinic attached to a general hospital rather than to a mental institution. Alcoholics in the early phases of the disease, as well as alcoholics without grave neurotic encumbrances, are unwilling to go as outpatients to mental institutions in countries where this involves a certain stigma of mental abnormality.

Because of the lack of this simple type of outpatient clinic, many psychiatrists who see alcoholics have not gained experience with the incipient alcoholic or uncomplicated alcoholic, and many ideas of the past concerning the treatment of alcoholism are based entirely on experience with late and complicated alcoholism.

The intensity and nature of psychotherapy required depend upon the stage of the alcoholic process at which the patient has arrived as well as upon the degree of neurotic or psychotic involvements.

As the outpatient clinic of the general hospital should deal with the early and uncomplicated cases only — which constitute the majority of the alcoholic population — the psychotherapeutic requirements at such a clinic may be at a minimum. As a matter of fact, largely so-called

“supportive” psychotherapy is required, sufficient to set up and reinforce the motivation of the alcoholic for stopping drinking. This involves the restitution of self-respect and self-confidence, a diminishing of the guilt feeling which arises out of the drinking behaviour, and a briefing of the alcoholic on the mode of life which will make it possible for him to carry on without alcoholic anaesthesia. It also requires a full understanding on the part of the patient that no form of drinking is possible for him without relapsing into gross alcoholism.

This type of supportive psychotherapy does not require a psychiatric specialist, although the guidance of the personnel should preferably be in the hands of a psychiatrist.

In the absence of a psychiatrist, this type of outpatient clinic may be headed by a physician with a strong interest in alcoholics and a general understanding of psychiatric principles. As a minimum requirement this physician should be assisted by one full-time social worker and a secretary; the assistance of a trained nurse is also desirable. Should finances allow, a second social worker is useful, particularly for the purpose of “follow-up” care of discharged patients. If the outpatient clinic is to serve at the same time as a diagnostic clinic, the presence of a psychiatrist on the staff must be regarded as indispensable.

In every instance physical examination must be arranged for at the medical outpatient clinic and the patient should be given prescriptions for whatever medication seems appropriate. In the cases of more serious medical involvements, which at this level are rather infrequent, referral to inpatient departments is, of course, required.

Whether the services of the physician are required on two half-days or four to five half-days a week will depend upon other facilities in the community. If an Alcoholics Anonymous group<sup>3</sup> is located in the community or near by, referral to that group will be feasible after four or five consultations and in that case two half-days' attendance per week on the part of the physician will be sufficient. If, on the other hand, as in most countries, Alcoholics Anonymous groups are not available, the average number of consultations per patient will amount to about 12, which would require five half-days per week on the part of the physician. An outpatient clinic of the type described can treat about 100 new alcoholic patients per year and can carry about 150 patients under more or less active treatment at any one time.

In view of the large proportion of alcoholics who can be treated at this level, it would seem that the general necessity for hospital beds and special inpatient facilities for the treatment of chronic alcoholism has been much

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<sup>3</sup> See *World Hlth Org. techn. Rep. Ser.* 1951, **42**, 15.

over-emphasized. It is true, of course, that in an occasional case of acute alcoholism, or of an alcoholic psychosis, hospitalization is a matter of urgent necessity, but such cases are the exception rather than the rule. It is unwise (as well as unnecessary) to organize the treatment of a large number of alcoholics around an *inpatient* set-up, although it is desirable to have such facilities available for the occasional cases where they are needed. The conventional outpatient department of the general hospital is ideal for treating most cases of uncomplicated alcoholism. From the patient's standpoint the emphasis is on the medical aspects of the problem, which is as it should be. From the doctor's standpoint it is easy to focus upon the ambulatory patient all the great resources in diagnosis and specialized treatment which a modern hospital affords. These include: laboratory techniques; x-ray; special clinics such as gynaecology, allergy, dermatology, endocrinology; a record system; and the appointment office. All the elaborate machinery for handling sick people is already set up and functioning, and absorbs an alcoholic clinic with little or no modification of existing facilities. Within such a framework it is possible to deal easily and effectively with most problems which come up in the course of treating an individual alcoholic.

It would seem to be educationally desirable for the medical personnel of the hospital, especially the interns and medical students, to have contact in an organized way with the clinical material of alcoholism. Alcoholic patients present many interesting and legitimate problems for medical investigation and research. One subsidiary function of an alcoholic clinic in a general hospital is to provide a framework for making alcoholic patients easily and routinely available for research and teaching purposes.

The time, effort, and cost entering into the treatment of alcoholics must be judged more at the level of early and uncomplicated alcoholism, as these form the largest proportion of the alcoholic population.

#### *Facilities at the second level of treatment*

In the following it is assumed throughout that the physical condition of the patient is taken care of and that adjuvant medical therapies (administration of hormone compounds, vitamins, disulfiram, conditioned reflex treatment, etc.) may be employed according to indications.

At the second level of public care intensive psychotherapy is required. If the alcoholic whose drinking behaviour originates in gross neurosis is to be helped successfully to live without alcohol, it will be necessary to give him insight into the conflicts which he is trying to solve through the use of alcohol, and to bring about an emotional readjustment which obviates the use of artificial means.

Such an elaborate attack on the response pattern of the patient is indicated also when gross neurotic origins are absent, but when the patient has progressed in his alcoholic career to a point at which his drinking behaviour has disrupted his inter-personal relations. At that juncture harassing social experiences and the accumulation of guilt lead the patient to a completely egocentric re-interpretation of his relation to his environment. It may be said that a superimposed or secondary neurotic response pattern develops which requires readjustment by psychiatric means.

Potentially the care of alcoholics at this level is feasible in any community which has a psychiatric or psycho-analytic outpatient department or a mental hygiene clinic. Actually, however, these facilities are rarely available to the alcoholic because of resistance of the clinic staff to admission of alcoholics. Such admissions are regarded as interference with the primary objects of such clinics. As a rule the staff do not wish to open the service to alcoholics because they fear a great influx of patients.

Because of this attitude it will be desirable to add to the staff a psychiatrist and a social worker who are specially interested in alcoholism, if such existing psychiatric or mental hygiene clinics should be suddenly opened to alcoholics.

Generally it may be more desirable to merge treatment of alcoholics at the first two levels into one clinic, rather than try to persuade psychiatric and mental health clinics to extend their services to alcoholics.

If such merging is performed, the outpatient clinic's staff will have to consist of one half-time psychiatrist, one full-time assistant psychiatrist, one half-time specialist of internal medicine, two full-time social workers, and one full-time secretary. If possible, the employment of a clinical psychologist for the administration and evaluation of tests should be considered. A clinic of this type will be able to deal with 350-400 alcoholics per year on a fairly intensive level.

#### *Treatment at the third and fourth levels*

At the third and fourth levels intra-mural treatment such as is available in public mental hospitals is necessary. In many countries mental hospitals admit alcoholics only when diagnosable psychosis is present. It is recommended that through amendment of the admission laws the facilities of such hospitals be extended to alcoholics without psychosis who fall into the categories described at levels three and four.

At the fourth level, by and large, only custodial care seems to be feasible, yet the degree of deterioration may be sometimes misjudged and measures must be taken to ensure periodic revision of the diagnosis. If such a course is indicated, the patient in custodial care may be referred to active therapy.

It is desirable that contact and co-operation be maintained between clinics and hospitals at the various treatment levels and that there should be every facility to make referrals from one institution to another.

#### *Other measures for rehabilitation*

Clinics devoted to the rehabilitation of alcoholics should seek mutual co-operation with social and welfare departments and societies, vocational guidance and placement agencies, speciality clinics, the courts, and police and prison authorities.

If formation of Alcoholics Anonymous groups should not be feasible, some type of group activity should be created for alcoholics and their relatives. It should be recognized that the families of alcoholics require counselling and aid and sometimes rehabilitation.

The subcommittee recommends that physicians be instrumental in establishing groups of Alcoholics Anonymous in their communities. This can be achieved only through encouraging their alcoholic patients to organize such groups and to assure the groups of their co-operation. The physician must realize, however, that Alcoholics Anonymous groups should and can be run only by recovered alcoholics; and he should not attempt, therefore, to give direction to the activities of the group. Once the group is established, physicians can keep the group alive and active by referring more and more alcoholics to it.

#### *Selection and training of clinical personnel*

The subcommittee has considered some desirable qualifications for the selection of clinical personnel working with alcoholics.

Some authorities have stated that the therapist treating alcoholics should be a total abstainer. This viewpoint seems to have been adopted in one or two countries. The subcommittee feels that the use or non-use of alcoholic beverages by the therapist is irrelevant as long as the therapist has no reputation for either excessive use of alcoholic beverages or for a censorious attitude towards any use. It is felt that such a censorious attitude excludes a sympathetic approach towards the alcoholic patient.

The employees of alcoholic clinics should have a good sense of public relations, as the goodwill of the public is essential for the continuance of such institutions, which in the beginning at least may be received with misgivings.

#### *Size of the problem*

The subcommittee has stressed the ambulatory treatment of alcoholics at the first two levels, i.e., for the great majority of the alcoholic population. In some medical circles it is felt that much more elaborate treatment



is required and that all alcoholics should be segregated for several weeks. The subcommittee feels that this is not a realistic attitude as the number of alcoholics is very great; the percentage of those who can cover the cost of elaborate treatments is fractional; and, furthermore, it must be considered that, contrary to popular belief, most alcoholics at the first and second levels are still employed, and, although their earning power is curtailed, they still support the family. The segregation of all these people for several weeks would create a new problem, a problem of an economic nature: namely, it would pose the problem of the support of the family of the hospitalized alcoholic. The experience which has accumulated at ambulatory clinics, and particularly the experience of Alcoholics Anonymous, is sufficient evidence that in the majority of cases hospitalization for the sole purpose of segregation is unnecessary.

It should also be remembered that the extent of alcoholism is consistently underestimated by health administrations in most countries. In many countries adult males in need of treatment for alcoholism outnumber those in need of treatment for tuberculosis by several hundred per cent. The concealed cost of alcoholism to many countries is enormous. The rehabilitation of these alcoholics therefore costs the community much less than leaving them untreated or handling them by penal measures.

### 3. Disulfiram<sup>4</sup>

The administration of disulfiram is but one of the many aids to the treatment of alcoholics. It is not in itself a cure, nor is it suitable for use with all cases. In well-selected cases, however, its value is such that the subcommittee has thought it worth discussing its use in detail. Such failures as have occurred with its use have resulted from its administration when patients who were unsuitable for its application were forced to submit to it. In general, therefore, although there are some exceptions, the first essential in choosing patients for its use must be their sincere desire for help and a recognition of their inability to control their drinking. Although the best results will be obtained with patients who have come entirely voluntarily for help and were not prompted by others to seek a cure, not all such types of patient will be found suitable. From a psychiatric point of view, certain abnormal personality types (above all hysterical types or predominantly "inadequate" individuals) and feeble-minded persons do not usually respond well to disulfiram. Even here, however, there are exceptions.

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<sup>4</sup> Disulfiram is the non-proprietary name for tetraethylthiuram disulfide; its most common proprietary names are Antabuse, Aversol, and Refusal.

There are also contra-indications to its use based upon the patient's physical condition. It should be clearly recognized that the drug should never be employed in persons suffering from hepatic or circulatory disorders. There are also suggestions in the literature that the drug is equally contra-indicated in cases of diabetic or renal disorders. The subcommittee is not convinced that such contra-indication is sufficiently supported by evidence. There is reason to believe, for instance, that disulfiram may be employed in cases of diabetes; and the subcommittee therefore recommends that further study of its use in diabetic or renal conditions should be undertaken.

Most of the patients who come for treatment voluntarily and are neither psychopathic personalities nor feeble-minded can receive disulfiram treatment as outpatients. In other cases it is desirable that the treatment should be started while the patient is under inpatient care. This is particularly the case with alcoholics who drink incessantly, e.g., daily and without ability to stop drinking, and also with the more severe psychopaths and feeble-minded individuals who do not face the reality of their situation sufficiently seriously. In all such cases it is better to start the treatment in a hospital, and in some cases the mental hospital or psychiatric clinic is the most suitable institution. In general, however, the best place to undertake outpatient treatment, where large-scale rehabilitation work with alcoholics is concerned, is an outpatient dispensary service of the type referred to previously in this report, situated in a well-equipped general hospital or working as an independent institution.

Before disulfiram treatment is started, it is essential to make a full physical examination and a routine analysis of urine to detect the presence of proteins, sugar, or urobilin. An electrocardiogram should always be taken and the liver be examined. A blood-sedimentation-rate test is also desirable. These laboratory tests are the minimum requirements but will as a rule be found to be all that are necessary. If the patient is in a bad general condition or seriously intoxicated, he should first be admitted to a hospital. Usually his general condition will improve sufficiently within a week to allow the administration of disulfiram to begin.

Whether the administration is undertaken to an outpatient or an inpatient, two tablets (0.5 g each) should be given on the evening of the first day, and on each of the following five to six days one tablet should be given daily. At the end of a week's treatment the patient's condition should be considered and if everything appears to be going well he may then receive a maintenance dose of half a tablet (0.25 g) every day.

At this time it is usual to make an alcohol test, partly in order to test the adequacy of the dosage of disulfiram (and, if necessary, to correct it) and, more importantly, in order to demonstrate to the patient the consequences of drinking while taking the drug. Although such a test is desirable as a routine, some physicians have felt that with patients voluntarily

seeking cure with every indication of a good prognosis, the test may be omitted, provided that the patient is clearly warned of the nature of the alcohol-disulfiram reaction. Physicians who hold this view do so on the grounds that it may be wiser to dispense with the test to avoid stimulating renewal of the craving by the drinking of alcohol. On the other hand, it should be pointed out that in cases where the alcohol test is not performed, the patient's own curiosity may lead him to test the efficacy of disulfiram by trying the effect of a drink, and that such a procedure may lead him into danger.

In general, therefore, the subcommittee recommends that a test should be made in all cases unless the physician is sufficiently confident that the patient is fully co-operative and therefore most unlikely to try the effect of drinking, and is also of the opinion that the taking of alcohol in the test situation is likely, in the particular case concerned, to re-create the craving. If a test is not performed, it is essential to warn the patient of the grave risk which will result from taking alcoholic beverages.

When the test is undertaken, it should be remembered that it provides the opportunity for powerful suggestion. It should, therefore, be carried out in such a way as to increase the suggestive effect. This does not necessarily mean that a drastic reaction should be provoked by a large dose of alcohol. It is often much more impressive for a heavy drinker to find that the apparently trivial amount of three teaspoonfuls of whisky or a third of a bottle of beer can produce an obvious and disturbing reaction. The test should, of course, be made with the beverage which the alcoholic habitually uses.

The alcohol test should not be used several times on the same patient, since there is evidence to suggest that continued repetition of the reaction can produce cardiac damage probably to the coronary circulation. For this reason and others the alcohol test should be repeated no more than is clinically essential, and disulfiram should not be used for aversion therapy, for which emetine and apomorphine are much more appropriate.

Taking the test in the presence of the wife is often reassuring to the latter, since it makes evident to her the strongly deterrent effect of the disulfiram-alcohol reaction.

The patient should be kept under observation not only at the time of the test, but for two or three hours afterwards, since delayed reactions may occur. At the time of the test the patient should be warned that the reaction he has just experienced will inevitably be produced by the ingestion of alcohol. He should also be warned that certain other substances, e.g., paraldehyde, can produce the reaction, and that the inhalation of alcoholic vapours (e.g., from paint) may produce the same reaction.

When the patient's work brings him into contact with industrial solvents, disulfiram treatment cannot be begun until he has changed his work to avoid contact with such chemicals.

During the first three to four weeks of disulfiram treatment the patient should receive psychotherapy combined with what may be termed "social therapy", namely, skilled assistance from a trained social worker in solving the social and occupational problems which his drinking has created. The nature of the psychotherapy which will be necessary will depend on the findings of psychiatric and psychological examinations. Clearly in those cases in which an established neurosis or neurotic pattern of behaviour precedes the development of alcoholism, it will have to be of a more intensive nature than for early cases with no evidence of marked psychological difficulties before the onset of alcoholism. In the latter type of case, the form of psychotherapy may often be of a comparatively simple type consisting of the discussion with the physician of the patient's drinking problem. In each individual case it is necessary to analyse the possible different causes of the addictive drinking and to discuss these causes with the patient. The next step in psychotherapy is to strengthen the patient's motivation to remain abstinent by giving him insight into the further physical, psychological, and social consequences of continued drinking. This can also be assisted by suggestion treatment.

For cases requiring more intensive psychotherapy, the possibility of psycho-analytically based group therapy should be considered. The experimental use of group therapy of this type for alcoholics has proved promising and, should this promise be fulfilled, such therapy will obviously be of great value in overcoming the difficulty of providing intensive individual psychotherapy on the scale necessary for a large-scale programme for the early treatment of alcoholism. Whatever the nature of the psychotherapy given throughout the whole of this phase, it is important that the physician should co-operate closely with an individual in the patient's immediate environment — his wife, a good friend, sometimes his employer or workmate. The problem should be discussed with this confidant together with the patient, and the physician should explain that the three must work as a team. The confidant must be informed of the effects of disulfiram and of the necessity of following the instructions closely. In certain cases, however, it is not possible to bring a third person into the discussion; in such a case the treatment remains a secret between the physician and his patient.

As the reference to "social therapy" above suggests, an important role is played throughout the whole period of disulfiram treatment by the trained social worker who can assist patients with their personal and social difficulties and can to a considerable extent act as a supervisor of the case under the direction of the physician.

Some patients, particularly those who have no confidant working with them and the physician in the treatment, should see the physician or the social worker regularly each week during the first six weeks of the disulfiram treatment. Later they may come every second week, and after the third month once every month until six months have passed. Such a period of supervision should be accepted as the minimum wherever this is possible.

#### 4. Other Recently Introduced Medicaments

##### *Hormone treatment*

There is a growing experience of the use of adrenocortical extract in the treatment of certain aspects of alcoholism. Its value is clear in disintoxication, since it can dramatically relieve many of the neurological and gastro-intestinal symptoms which otherwise accompany the sudden cessation of heavy drinking. In addition, it has been employed over a more lengthy period of time to assist the individual in remaining abstinent during the treatment of alcoholism. Before its value in such a connexion can be accepted as proven, however, further work is necessary. With the exception of raised blood-pressure, there appears to be no contra-indication to its use. Adrenocorticotrophic hormone (ACTH) has been employed in the treatment of delirium tremens and very favourable results reported. These promising results make it important that research on the endocrine metabolism in alcoholism should be intensified.

##### *Myanesin*

This preparation has been found valuable in suppressing tension and agitation during disintoxication and in decreasing the need for sedatives during that period. It has also been reported to be of great value in the treatment of delirium tremens.

#### 5. Surveys and Statistics on Alcoholism

The Executive Board of WHO, at its eighth session,<sup>5</sup> approved the proposal made by the Alcoholism Subcommittee in the report on its first session<sup>6</sup> that a small group of experts on statistical problems connected with alcoholism should be convened and should report to the subcommittee.

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<sup>5</sup> Resolution EB8.R45, *Off. Rec. World Hlth Org.* 36, 14

<sup>6</sup> *World Hlth Org. techn. Rep. Ser.* 1951, 42, 10, 17

This group was convened by the Director-General, and its report is given in full in Annex 1.<sup>7</sup>

Subject to the comments which follow, the subcommittee is in general agreement with the report, which it considers will be of assistance to all national health-administrations interested in surveying the extent and nature of the problem of alcoholism with which they are faced. The subcommittee particularly wishes to emphasize the present inadequacy of statistics on this subject, and to underline the point made by the working group that in the international medical statistics at present recorded the only useful elements for a given population are those furnished by the statistics of causes of death, since no general international statistics of morbidity exist.

The International Statistical Classification of Diseases, Injuries, and Causes of Death (1948) contains only two headings in which an alcoholic etiology is predominant: "Alcoholism" (322) and "Cirrhosis of liver" (581).<sup>8</sup>

When countries have made the desirable modifications in their declarations of causes of death, "alcoholism" will figure, statistically, as a contributory cause. But under present conditions the evolution of the mortality from "alcoholism" and from "cirrhosis of the liver" must be considered as the sole useful statistical elements. These figures represent only a minimum fraction of alcoholism in general (mortality and morbidity). The "raw" figures cannot alone be used as a basic element to indicate the total figure of alcoholics existing in a given country at a given time.

The evolution of alcoholic mortality reflects the evolution of alcoholism in its most grave form from a vital point of view, the modifications of this evolution being functions of various elements in the social structure or in therapy. In as far as these functions are understood, the curves of mortality may be compared not only for the same country, but also between different countries.

The Jellinek estimation formula, given in Annex 2 of the report on the first session of the Alcoholism Subcommittee,<sup>9</sup> is the only attempt (known to this subcommittee) which has been made to devise a means of working from mortality statistics (in this case, cirrhosis of the liver) while making allowances for the influences mentioned in the previous paragraph in such a way that an approximate estimation of the morbidity

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<sup>7</sup> See page 18.

<sup>8</sup> See: World Health Organization (1948) *Manual of the International Statistical Classification of Diseases, Injuries, and Causes of Death*, Geneva, vol. 1, pp. 113, 166 (Bull. World Hlth Org., Suppl. 1).

<sup>9</sup> *World Hlth Org. techn. Rep. Ser.* 1951, 42, 21

of alcoholism can be made. Whatever technical objections may be raised to the formula in its present form, it represents a promising new approach to the assessment of alcoholism morbidity, and merits further study by national health-administrations.

Finally, the subcommittee wishes to draw particular attention to the working group's suggestion that a survey of alcoholism should be undertaken in one of the proposed health demonstration areas, and recommends that WHO should undertake such a survey in collaboration with the government concerned.

## 6. Classification

Since the first meeting of the subcommittee, developments have taken place which make it desirable to enlarge to some degree on the question of classification of alcoholics and other excessive drinkers.

There has been an increase in demand for such definitions, and the growing tendency to survey the incidence of alcoholism in various countries also requires at least a rudimentary classification.

There is, of course, no lack of existing classifications. In fact, the existence of so many different classifications is one of the reasons which prompt the subcommittee to suggest a classification of cases by broad groups into which there will be no difficulty in fitting the many subdivisions of other existing classifications. Most of the existing classifications have failed to achieve general agreement either because they are entirely descriptive or on the other hand presuppose views on the etiology of the different types which are not shared by more than a minority of students of alcoholism.

The classification proposed by the subcommittee therefore attempts on the one hand to avoid begging etiological questions and on the other to avoid becoming involved in detailed discrimination on a symptomatic basis. This is not to deny the relevance of the many behaviour types which have been described by various authors and which may be of definitely prognostic value.

Furthermore, many of the headings proposed in existing classifications are based on the study of a patient at a particular moment in the course of the development of his disorder. Such a classification inevitably means that the same patient may well be placed under different headings of the classification at different periods of his disorder.

In the report on its first session, the subcommittee suggested the following as an ad hoc and provisional definition of alcoholism :

“... any form of drinking which in its extent goes beyond the traditional and customary ‘dietary’ use, or the ordinary compliance with the social drinking customs of the

whole community concerned, irrespective of the etiological factors leading to such behaviour and irrespective also of the extent to which such etiological factors are dependent upon heredity, constitution, or acquired physiopathological and metabolic influences".<sup>10</sup>

The subcommittee would now consider it more appropriate to use the preceding definition to define the term "excessive drinking" and would add to it the following definition of alcoholism:

Alcoholics are those excessive drinkers whose dependence upon alcohol has attained such a degree that it shows a noticeable mental disturbance or an interference with their bodily and mental health, their inter-personal relations, and their smooth social and economic functioning; or who show the prodromal signs of such developments. They therefore require treatment.

The developmental process of alcoholism is now beginning to be understood in some detail. Jellinek's description, based on an extensive analysis of case material, is set out in Annex 2.<sup>11</sup> The process of development begins with a stage which may be designated as "symptomatic drinking". This mode of drinking may be the symptom of psychological or physical pathology or of social conditions. While all forms of drinking — even the most moderate forms — are by definition symptomatic at least of social form and convention, in this particular instance the subcommittee is thinking of excessive symptomatic drinking. All forms of excessive drinking begin with a symptomatic stage. Under certain conditions this stage may be extremely prolonged and may not develop further.

If in the course of time, because of individual and environmental factors, a dependence develops of a degree as described in the subcommittee's definition of alcoholics, one may speak either of habitual symptomatic drinkers or of symptomatic drinkers with addiction, according to criteria stipulated in Annex 2.<sup>11</sup>

A simple broad classification into which perhaps all drinker types proposed by various authors may be readily fitted is given below:

- |  |              |
|--|--------------|
| (1) Irregular symptomatic excessive drinkers | } Alcoholics |
| (2) Habitual symptomatic excessive drinkers  |              |
| (3) Addictive drinkers (alcohol addicts)     |              |

The two latter groups, therefore, comprise the alcoholics proper.

<sup>10</sup> *World Hlth Org. techn. Rep. Ser.* 1951, 42, 5

<sup>11</sup> See page 26.



Complications of a physical nature may occur in all the three classes, while mental complications (acute, chronic, mild, or severe) may occur in classes (2) and (3) only.

The various types of periodic drinkers and periodic alcoholics may also be subordinated into any of the three categories.

A close study of the developments described in Annex 2 will show that each of the above three categories may be formulated with such definitiveness that surveys and experiments may be carried out on well-defined alcoholic populations.

It may be repeated here that all the types in previous classifications can readily be subordinated to the broad categories.

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## Annex 1

**REPORT OF A WORKING GROUP  
ON THE STATISTICS AND THE SURVEYING  
OF ALCOHOLISM AND ALCOHOL CONSUMPTION**

In the report on its first session the Alcoholism Subcommittee of the Expert Committee on Mental Health recommended the convening of a small expert working group for the study of statistics related to the problem of alcoholism.<sup>1</sup>

The Director-General of WHO, with the approval of the Executive Board,<sup>2</sup> convened such a meeting in Geneva on 5 and 6 October 1951 at which the following were present :

Dr. G. R. Hargreaves, Chief, Mental Health Section, WHO

Professor E. M. Jellinek, WHO Consultant on Alcoholism ; Dean, Institute of Alcohol Studies, Texas Christian University, Fort Worth, Tex., USA

Dr. M. Pizzi, Chief, Morbidity Statistics Section, WHO

Dr. N. Sinai, Professor of Public Health ; Director, Bureau of Health Economics, University of Michigan, Ann Arbor, Mich., USA

Dr. S. Zurukzoglu, Expert en statistiques médicales du Bureau fédéral de Statistique, Berne, Switzerland

The report of the working group follows.

**Statistics of Alcohol Consumption**

The gist of the discussion of this item was that the comparison of even the most refined per capita consumption-rates permits of rather limited conclusions only. The valid interpretation of rate differentials requires an intimate knowledge of the drinking patterns in which the consumption comes about.

The same quantities of alcohol consumed may have different effects on health and on social and economic conditions according to whether this consumption is evenly distributed over all subgroups of the population

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<sup>1</sup> *World Hlth Org. techn. Rep. Ser.* 1951, **42**, 10, 17

<sup>2</sup> Resolution EB8.R45, *Off. Rec. World Hlth Org.* **36**, 14

or whether the bulk is consumed largely by one or two groups. Furthermore, marked differential effects may be expected depending upon whether the consumption of a given average quantity is spread evenly over a small daily intake — let us say with meals — or whether the drinking pattern is such that the consumption occurs largely at excessive week-end drinking bouts. These are only a few elements of the drinking pattern which ought to be known. The recommendations of the working group on the study of drinking patterns are discussed later.

#### *Per capita rates*

As there is little knowledge of these patterns at present and as surveys on this subject may not be expected to develop at a fast rate, the present possible use of per capita consumption-rates must be considered.

The working group recommends distinction of the following three per capita rates :

- (1) the “crude” per capita rate;
- (2) the “age-corrected” per capita rate;
- (3) the “effective” per capita rate.

1. The “crude” per capita rate is the total number of units of a type of alcoholic beverage divided by the number of *all* inhabitants of a given geographic region at a given time. This rate includes a large number of individuals who evidently — because of age — either do not consume alcoholic beverages, or do so in amounts which are statistically insignificant. All “official” statistics are given in terms of crude rates. For reasons which are discussed under the next item, these crude rates have the least comparative value, but should nevertheless form part of any complete consumption analysis.

2. In the “age-corrected” per capita rate, the denominator is the “population of drinking age”, i.e., the number of inhabitants whose age permits of regarding them as potential drinkers of sufficient quantities to affect the consumption statistics. (This is a first approximation to age correction.) The working group recommends that the population of 18 years and older be taken as representative of the population of drinking age.

The proportion of the population of 18 years and older varies from country to country, and within a country it changes in the course of years.

To give a few examples, the population of 20 years and older in 1949 in Italy was 66.02% and in Sweden 71.93%. In Spain (for which statistics are available only for the year 1940) the proportion was 61.8%.

A time comparison in the USA shows the following striking statistics : in the year 1850, the percentage of 20 years and older was 47.6, and in 1940, 65.6.

It is obvious that any trend in consumption can be approximated only through the use of the age-corrected per capita rate and that the crude per capita rate might result in entirely misleading trends.

Of course, not every person of the age of 18 years and older is an actual consumer of alcoholic beverages. This age-class can be regarded only as potential consumers. Within this age-class the percentage of actual users may vary considerably from country to country and within given time intervals. Particularly there may be marked variation between the relative incidence of male and female users in these age-classes. Thus even the age-corrected per capita rate does not represent more than a fair approximation towards a truly valid rate. But at present, at least in most countries, no more satisfactory rate will be feasible.

3. In the "effective" per capita rate, the denominator is an estimate of the actual users, arrived at through sampling procedures. Such estimates are available in the USA for several years of the past decade. In one of the surveys the percentage of users was determined by sex, according to various types of beverage and frequency of use.

The working group recommends that periodic surveys of the actual number of users be made in all countries in which the alcohol problem seems to be of any importance. The modus of such surveys is suggested under the heading "Survey of drinking patterns" (page 22).

Not only should the per capita rates be computed for each beverage type separately but, in connexion with each type, the total absolute alcohol should be stated, as the alcohol content of wines, beers, and spirits varies from country to country and may vary even within a country over larger time intervals. A total absolute-alcohol consumption derived from all beverages may be computed but should never be used without an analysis of the various types of beverage consumed. The consumption of each of those types (beers, wines, and spirits) has its implications.

#### *Interpretation of per capita rates*

Per capita consumption-rates, even the most refined ones, should never be interpreted as indicating a high or low degree of alcoholism or changes in the incidence of alcoholism. It would require per capita rates of extraordinary magnitude — as a matter of fact, of a magnitude which has never come within range of observation — to permit of such inferences. Changes in per capita rates are frequently interpreted in such terms as "people have been drinking more (or less) this year than last year", etc. Such

conclusions are entirely unwarranted, as an increase in the per capita rate may be due to an increase in the percentage of users within the population of drinking age, or to increased individual consumption, or both. But when changes in the percentage or number of users are not known, the meaning of changes in the consumption-rates will be necessarily uncertain.

Nevertheless, striking changes in the magnitude of per capita rates always indicate that an investigation of the source of change is desirable. No doubt an increase in the relative incidence of users within an age-class is a warning signal that within 10 or 15 years an increase in the rate of growth of alcoholism may be expected, as a certain percentage of users are liable to alcoholism.

#### *Reliability of consumption statistics*

In the above discussion it was assumed that the statistics on alcoholic-beverage consumption are of a good degree of reliability. Such an assumption is by no means always warranted. The working group emphasizes that the method of accounting for alcoholic-beverage consumption varies from country to country. In some countries production and consumption are equated. In other countries, particularly those in which a government monopoly exists, the consumption statistics are based on actual sales, while in other countries the basis of accounting may be the tax-withdrawn quantities. There are many other factors which enter into the accounting system and may make the comparability of alcohol-consumption statistics rather questionable.

The working group recommends the undertaking of a study of the bases of consumption accounting in various countries in order to improve the degree of comparability. Such a study could be undertaken either by a specially created international committee or perhaps by one of the existing offices of the United Nations.

The possibility of illicit production and sale ("bootlegging") of alcoholic beverages always creates suspicion of the validity of consumption statistics. In some countries, especially in those in which prohibition or partial prohibition exists, "bootlegging" may be a considerable "factor". The working group wishes to state its opinion that in general in countries where prohibition does not exist the effect of "bootlegging" upon the general consumption statistics is being greatly exaggerated by the "wets" as well as the "dries" — of course for entirely different reasons.

No matter what the degree of "bootlegging" activity may be, all consumption statistics on alcoholic beverages should be labelled as "apparent" consumption in order to avoid the reproach of pretension.

### Survey of Drinking Patterns

The knowledge of drinking patterns of different countries is essential to applied sociology and education in their relations to prevention of alcoholism. Furthermore, as mentioned above, the comparison of consumption-rates of different countries and times can be interpreted with any validity only in the light of the knowledge of these drinking patterns.

The working group does not intend to propose an outline of a survey, but would like to enumerate some of the desirable items of investigation and to submit a few suggestions on the modus of the survey.

Concerning the ways and means for carrying out such a survey, the following recommendations are made :

For reasons which hardly need to be mentioned, any survey on drinking should be part of a broader survey. According to the experience of the Institute of Nutrition and Dietetics, Rome, data on drinking can be obtained in the frame of a nutritional survey without arousing antagonism. Surveys on means of relaxation, on mode of living, etc., may be devised to yield the required information on drinking habits. The principle is to avoid the singling-out of drinking as a subject of inquiry.

Such surveys may be carried out most profitably in a new health demonstration area, such as are being assisted by WHO, as this offers an opportunity to correlate findings of the survey with other health data. Particularly, those countries should be considered where the alcoholism problem is of considerable interest and where at least a few experienced research workers on alcoholism are available.

The survey should proceed with modern statistical sampling methods and should produce sufficiently large subsamples in order to permit of differentiation among cultural subgroups (occupational, ethnic, social subgroups, etc.) of the parent population under question.

Below are enumerated a few items which should be included in the survey :

- Determination, by sex and broad age-groups, of the frequency of use of beer, cider, wines, and spirits

- The occasions for drinking (meals, celebrations, solemn occasions, etc.)

- The locale of drinking

- Drinking of the sexes together or separately

- Attitude of the sexes towards drinking by the opposite sex

- Tolerance for drunken behaviour

- Negative sanctions on unacceptable drinking behaviour

Who are the sanctioning agents ?

Expressions relating to drunkenness and the meaning of these expressions

Motivations for drinking

"Prestige" of drinking

Refusal of a drink (e.g., the ease, or difficulty, of refusal in the milieu concerned)

Ideas about alcohol as a food, a medicine, etc.

The motivations of total abstainers

The role of alcoholic beverages in the family budget, if feasible

"Trouble" caused by excessive drinking :

- (a) Loss of time on job
- (b) Loss of jobs
- (c) Difficulties with family
- (d) Arrest for drunkenness
- (e) Neglect of children
- (f) Hospitalization because of drinking
- (g) Occurrence of "blackouts"
- (h) Frequency of intoxication, etc.

These questions may lead also to a fair estimate of the incidence of alcoholism in the area under study.

### Indicators of Alcoholism

In some cases a fall in the curve of deaths from acute and chronic alcoholism has reflected progress in the treatment of those conditions rather than a fall in the incidence of alcoholism ; this curve is not, therefore, suitable as an international index.

There are some cities or countries in which the statistics of delirium tremens, first admission to mental and general hospitals because of alcoholism, as well as arrests for alcoholism are valid indications of changes in the extent of alcoholism, but such instances are the exception rather than the rule.

For the purpose of comparing different areas, and in most instances for comparing different times within a given area, the statistics mentioned above are not suitable.

While the statistics mentioned above all suffer from serious defects, some weight must be attached to them when all point in the same direction and when a correlation of errors can be excluded.

Death from cirrhosis of the liver occurs in somewhat less than 10% of all cases of alcoholism with complications and is not a direct result of excessive drinking, but the contingency between alcoholism and cirrhosis of the liver is so definite that changes in the death-rate from this cause do indicate changes in the rates of alcoholism. The working group came to this conclusion after careful consideration of the possible diagnostic deficiencies in this cause of death. The diagnostic factors must be studied, however, in order to use these statistics for international comparisons with any degree of confidence.

The question of excess male mortality in certain age-classes as an index of alcoholism was touched upon and the investigation of this rather complex question by an international study-group seems to be indicated.

In connexion with this the working group wishes to recommend the study of mortality among alcoholics from other causes than alcoholism *per se*.

No matter which index is used, a certain caution must be recommended in relation to the interpretation of changes. As alcoholism is the product of several years of heavy drinking, an increase in the incidence of alcoholic complications in any given year cannot be interpreted as an indication of increased excessive drinking in that year.

#### Estimates of the Number of Alcoholics

In some communities practically all alcoholics are known to the authorities, and it may be feasible to extrapolate the incidence to the entire country in which these communities are located, but such conditions obtain in one or two countries only.

The working group discussed estimation by the Jellinek formula.<sup>3</sup> This method of estimation makes certain assumptions. In order to validate these assumptions a periodic checking of the "constants" is required.

The main tacit assumption is that the contribution of excessive alcohol use to deaths from cirrhosis of the liver is constant from year to year (but there is no assumption that it is constant from country to country). In the opinion of a minority of the working group, this factor will tend to underestimate the number of alcoholics. The majority, however, believes that over-estimates too could occur.

The working group recommends that in all interested countries the time trends should be re-analysed every five years in order to determine whether the constant *P* needs to be changed. There should also be a

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<sup>3</sup> See *World Hlth Org. techn. Rep. Ser.* 1951, 42, 21.



study, country by country, to determine whether the constant  $K$  of the formula may be the same for all countries or requires local modifications.

These studies are urged, as the formula under question seems to be at present the only means for comparative estimates of alcoholism and, furthermore, whenever there were means to check upon the estimate through predictions from other sources, the degree of agreement was quite remarkable.

### **Sample Census of Alcoholics**

The working group finds that sample censuses of alcoholics would involve an expenditure of work and money far in excess of the utility of the information which could be expected. One or two sample censuses may be undertaken for the purpose of verifying the estimates discussed above, but the working group does not wish to make this the subject of a recommendation.

For the purpose of verification of estimates, such procedures as are outlined in the section "Survey of drinking patterns" (page 22) would seem to be sufficient.

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## Annex 2

THE PHASES OF ALCOHOL ADDICTION<sup>1</sup>

## Introduction

Only certain forms of excessive drinking — those which in the present report are designated as alcoholism<sup>2</sup> — are accessible to medical-psychiatric treatment. The other forms of excessive drinking, too, present more or less serious problems, but they can be managed only on the level of applied sociology, including law enforcement. Nevertheless, the medical profession may have an advisory role in the handling of these latter problems and must take an interest in them from the view-point of preventive medicine.

The conditions which have been briefly defined by the subcommittee as alcoholism are described in the following pages in greater detail, in order to delimit more definitely those excessive drinkers whose rehabilitation primarily requires medical-psychiatric treatment.

Furthermore, such detailed description may serve to forestall a certain potential danger which attaches to the disease conception of alcoholism, or more precisely of addictive drinking.

With the exception of specialists in alcoholism, the broader medical profession and representatives of the biological and social sciences and the lay public use the term "alcoholism" as a designation for any form of excessive drinking instead of as a label for a limited and well-defined area of excessive drinking behaviours. Automatically, the disease conception of alcoholism becomes extended to all excessive drinking irrespective of whether or not there is any physical or psychological pathology involved in the drinking behaviour.

Such an unwarranted extension of the disease conception can only be harmful, because sooner or later the misapplication will reflect on the legitimate use too and, more importantly, will tend to weaken the ethical basis of social sanctions against drunkenness.

*The disease conception of alcohol addiction*

The subcommittee has distinguished two categories of alcoholics, namely, "alcohol addicts" and "habitual symptomatic excessive

<sup>1</sup> A summary of lectures delivered by Professor E. M. Jellinek at the European Seminar on Alcoholism, Copenhagen, Denmark, October 1951.

<sup>2</sup> See page 16.

drinkers".<sup>3</sup> For brevity's sake the latter will be referred to as non-addictive alcoholics. Strictly speaking, the disease conception attaches to the alcohol addicts only, but not to the habitual symptomatic excessive drinkers.

In both groups the excessive drinking is symptomatic of underlying psychological or social pathology, but in one group after several years of excessive drinking "loss of control" over the alcohol intake occurs, while in the other group this phenomenon never develops. The group with the "loss of control" is designated as "alcohol addicts". (There are other differences between these two groups and these will be seen in the course of the description of the "phases".)

The disease conception of alcohol addiction does not apply to the excessive drinking, but solely to the "loss of control" which occurs in only one group of alcoholics and then only after many years of excessive drinking. There is no intention to deny that the non-addictive alcoholic is a sick person; but his ailment is not the excessive drinking, but rather the psychological or social difficulties from which alcoholic intoxication gives temporary surcease.

The "loss of control" is a disease condition per se which results from a process that superimposes itself upon those abnormal psychological conditions of which excessive drinking is a symptom. The fact that many excessive drinkers drink as much as or more than the addict for 30 or 40 years without developing loss of control indicates that in the group of "alcohol addicts" a superimposed process must occur.

Whether this superimposed process is of a psychopathological nature or whether some physical pathology is involved cannot be stated as yet with any degree of assurance, the claims of various investigators notwithstanding.

Nor is it possible to go beyond conjecture concerning the question whether the "loss of control" originates in a predisposing factor (psychological or physical), or whether it is a factor acquired in the course of prolonged excessive drinking.

The fact that this "loss of control" does not occur in a large group of excessive drinkers would point towards a predisposing X factor in the addictive alcoholics. On the other hand this explanation is not indispensable as the difference between addictive and non-addictive alcoholics could be a matter of acquired modes of living—for instance, a difference in acquired nutritional habits.

#### *The meaning of symptomatic drinking*

The use of alcoholic beverages by society has primarily a symbolic meaning, and secondarily it achieves "function". Cultures which accept

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<sup>3</sup> See page 16.

this custom differ in the nature and degree of the "functions" which they regard as legitimate. The differences in these "functions" are determined by the general pattern of the culture, e.g., the need for the release and for the special control of aggression, the need and the ways and means of achieving identification, the nature and intensity of anxieties and the modus for their relief, and so forth. The more the original symbolic character of the custom is preserved, the less room will be granted by the culture to the "functions" of drinking.

Any drinking within the accepted ways is symptomatic of the culture of which the drinker is a member. Within that frame of cultural symptomatology there may be in addition individual symptoms expressed in the act of drinking. The fact that a given individual drinks a glass of beer with his meal may be the symptom of the culture which accepts such a use as a refreshment, or as a "nutritional supplement". That this individual drinks at this given moment may be a symptom of his fatigue, or his elation or some other mood, and thus an individual symptom, but if his culture accepts the use for these purposes it is at the same time a cultural symptom.

In this sense even the small or moderate use of alcoholic beverages is symptomatic, and it may be said that all drinkers are culturally symptomatic drinkers or, at least, started as such.

The vast majority of the users of alcoholic beverages stay within the limits of the culturally accepted drinking behaviours and drink predominantly as an expression of their culture, and while an individual expression may be present in these behaviours its role remains insignificant.

For the purpose of the present discussion the expression "symptomatic drinking" will be limited to the predominant use of alcoholic beverages for the relief of major individual stresses.

A certain unknown proportion of these users of alcoholic beverages, perhaps 20%, are occasionally inclined to take advantage of the "functions" of alcohol which they have experienced in the course of its "cultural use". At least at times, the individual motivation becomes predominant and on those occasions alcohol loses its character as an ingredient of a beverage and is used as a drug.

The "occasional symptomatic excessive drinker" tends to take care of the stresses and strains of living in socially accepted — i.e., "normal" — ways, and his drinking is most of the time within the cultural pattern. After a long accumulation of stresses, however, or because of some particularly heavy stress, his tolerance for tension is lowered and he takes recourse to heroic relief of his symptoms through alcoholic intoxication.<sup>4</sup>

<sup>4</sup> This group does not include the regular "periodic alcoholics".

Under these circumstances the "relief" may take on an explosive character, and thus the occasional symptomatic excessive drinker may create serious problems. No psychological abnormality can be claimed for this type of drinker, although he does not represent a well-integrated personality.

Nevertheless, within the group of apparent "occasional symptomatic excessive drinkers" there is a certain proportion of definitely deviating personalities who after a shorter or longer period of occasional symptomatic relief take recourse to a constant alcoholic relief, and drinking becomes with them a "mode of living". These are the "alcoholics" of whom again a certain proportion suffer "loss of control", i.e., become "addictive alcoholics".

The proportion of alcoholics (addictive and non-addictive) varies from country to country, but does not seem to exceed in any country 5% or 6% of all users of alcoholic beverages. The ratio of addictive to non-addictive alcoholics is unknown.

### **The Chart of Alcohol Addiction**

The course of alcohol addiction is represented graphically in fig. 1. The diagram is based on an analysis of more than two thousand drinking histories of male alcohol addicts. Not all symptoms shown in the diagram occur necessarily in all alcohol addicts, nor do they occur in every addict in the same sequence. The "phases" and the sequences of symptoms within the phases are characteristic, however, of the great majority of alcohol addicts and represent what may be called the average trend.

For alcoholic women the "phases" are not as clear-cut as in men and the development is frequently more rapid.

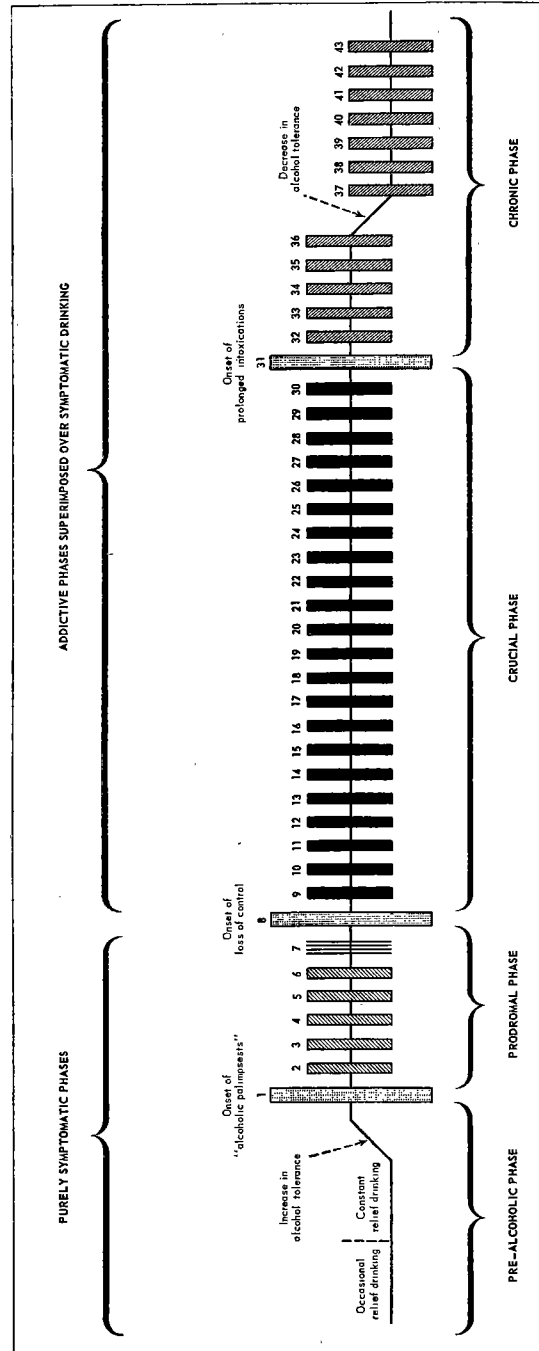
The "phases" vary in their duration according to individual characteristics and environmental factors. The "lengths" of the different phases on the diagram do not indicate differences in duration, but are determined by the number of symptoms which have to be shown in any given phase.

The chart of the phases of alcohol addiction serves as the basis of description, and the differences between addictive and non-addictive alcoholics are indicated in the text.

#### *The pre-alcoholic symptomatic phase*

The very beginning of the use of alcoholic beverages is always socially motivated in the prospective addictive and non-addictive alcoholic. In contrast to the average social drinker, however, the prospective alcoholic

FIG. 1. THE PHASES OF ALCOHOL ADDICTION



The large bars denote the onset of major symptoms which initiate phases.  
 The shorter bars denote the onset of the symptoms within a phase.  
 Reference to the numbering of the symptoms is made in the text.

(together with the occasional symptomatic excessive drinker) soon experiences a rewarding relief in the drinking situation. The relief is strongly marked in his case because either his tensions are much greater than in other members of his social circle, or he has not learned to handle those tensions as others do.

Initially this drinker ascribes his relief to the situation rather than to the drinking and he seeks therefore those situations in which incidental drinking will occur. Sooner or later, of course, he becomes aware of the contingency between relief and drinking.

In the beginning he seeks this relief occasionally only, but in the course of six months to two years his tolerance for tension decreases to such a degree that he takes recourse to alcoholic relief practically daily.

Nevertheless his drinking does not result in overt intoxication, but he reaches towards the evening a stage of surcease from emotional stress. Even in the absence of intoxication this involves fairly heavy drinking, particularly in comparison to the use of alcoholic beverages by other members of his circle. The drinking is, nevertheless, not conspicuous either to his associates or to himself.

After a certain time an increase in alcohol tolerance may be noticed i.e., the drinker requires a somewhat larger amount of alcohol than formerly in order to reach the desired stage of sedation.

This type of drinking behaviour may last from several months to two years according to circumstances and may be designated as the pre-alcoholic phase, which is divided into stages of occasional relief-drinking and constant relief-drinking.

#### *The prodromal phase*

The sudden onset of a behaviour resembling the "black-outs" in anoxaemia marks the beginning of the prodromal phase of alcohol addiction. The drinker who may have had not more than 50 to 60 g of absolute alcohol and who is not showing any signs of intoxication may carry on a reasonable conversation or may go through quite elaborate activities without a trace of memory the next day, although sometimes one or two minor details may be hazily remembered. This amnesia, which is not connected with loss of consciousness, has been called by Bonhöfer the "alcoholic palimpsests", with reference to old Roman manuscripts superimposed over an incompletely erased manuscript.

"Alcoholic palimpsests" (1)<sup>5</sup> may occur on rare occasions in an average drinker when he drinks intoxicating amounts in a state of physical

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<sup>5</sup> The figures in parentheses following the descriptions of the individual symptoms represent their order as given in fig. 1.

or emotional exhaustion. Non-addictive alcoholics, of course, also may experience "palimpsests", but infrequently and only following rather marked intoxication. Thus, the frequency of "palimpsests" and their occurrence after medium alcohol intake are characteristic of the prospective alcohol addict.

This would suggest heightened susceptibility to alcohol in the prospective addict. Such a susceptibility may be psychologically or physiologically determined. The analogy with the "black-outs" of anoxaemia is tempting. Of course, an insufficient oxygen supply cannot be assumed, but a malutilization of oxygen may be involved. The present status of the knowledge of alcoholism does not permit of more than vague conjectures which, nevertheless, may constitute bases for experimental hypotheses.

The onset of "alcoholic palimpsests" is followed (in some instances preceded) by the onset of drinking behaviours which indicate that, for this drinker, beer, wine, and spirits have practically ceased to be beverages and have become sources of a drug which he "needs". Some of these behaviours imply that this drinker has some vague realization that he drinks differently from others.

*Surreptitious drinking* (2) is one of these behaviours. At social gatherings the drinker seeks occasions for having a few drinks unknown to others, as he fears that if it were known that he drinks more than the others he would be misjudged: those to whom drinking is only a custom or a small pleasure would not understand that because he is different from them alcohol is for him a necessity, although he is not a drunkard.

*Preoccupation with alcohol* (3) is further evidence of this "need". When he prepares to go to a social gathering his first thought is whether there will be sufficient alcohol for his requirements, and he has several drinks in anticipation of a possible shortage.

Because of this increasing dependence upon alcohol, the onset of *avid drinking* (4) (gulping of the first or first two drinks) occurs at this time.

As the drinker realizes, at least vaguely, that his drinking is outside of the ordinary, he develops *guilt feelings about his drinking behaviour* (5) and because of this he begins to *avoid reference to alcohol* (6) in conversation.

These behaviours, together with an *increasing frequency of "alcoholic palimpsests"* (7), foreshadow the development of alcohol addiction; they are premonitory signs, and this period may be called the prodromal phase of alcohol addiction.

The consumption of alcoholic beverages in the prodromal phase is "heavy", but not conspicuous, as it does not lead to marked, overt



intoxications. The effect is that the prospective addict reaches towards evening a state which may be designated as emotional anaesthesia. Nevertheless, this condition requires drinking well beyond the ordinary usage. The drinking is on a level which may begin to interfere with metabolic and nervous processes as evidenced by the frequent "alcoholic palimpsests".

The "covering-up" which is shown by the drinker in this stage is the first sign that his drinking might separate him from society, although initially the drinking may have served as a technique to overcome some lack of social integration.

As in the prodromal phase rationalizations of the drinking behaviour are not strong and there is some insight as well as fear of possible consequences, it is feasible to intercept incipient alcohol addiction at this stage. In the United States of America, the publicity given to the prodromal symptoms begins to bring prospective alcoholics to clinics as well as to groups of Alcoholics Anonymous.

It goes without saying that even at this stage the only possible modus for this type of drinker is total abstinence.

The prodromal period may last anywhere from six months to four or five years according to the physical and psychological make-up of the drinker, his family ties, vocational relations, general interests, and so forth. The prodromal phase ends and the crucial or acute phase begins with the onset of loss of control, which is the critical symptom of alcohol addiction.

#### *The crucial phase*

*Loss of control* (8) means that as soon as any small quantity of alcohol enters the organism a demand for more alcohol is set up which is felt as a physical demand by the drinker, but could possibly be a conversion phenomenon. This demand lasts until the drinker is too intoxicated or too sick to ingest more alcohol. The physical discomfort incumbent upon this drinking behaviour is contrary to the object of the drinker, which is merely to feel "different". As a matter of fact, the bout may not even be started by any individual need of the moment, but by a "social drink".

After recovery from the intoxication, it is not the "loss of control" — i.e., the physical demand, apparent or real — which leads to a new bout after several days or several weeks; the renewal of drinking is set off by the original psychological conflicts or by a simple social situation which involves drinking.

The "loss of control" is effective after the individual has started drinking, but it does not give rise to the beginning of a new drinking bout. The drinker has lost the ability to control the quantity once he has started, but he still can control whether he will drink on any given occasion or not. This is evidenced in the fact that after the onset of "loss of control" the drinker can go through a period of voluntary abstinence ("going on the water wagon").

The question of why the drinker returns to drinking after repeated disastrous experiences is often raised. Although he will not admit it, the alcohol addict believes that he has lost his willpower and that he can and must regain it. He is not aware that he has undergone a process which makes it impossible for him to control his alcohol intake. To "master his will" becomes a matter of the greatest importance to him. When tensions rise, "a drink" is the natural remedy for him and he is convinced that this time it will be one or two drinks only.

Practically simultaneously with the onset of "loss of control" the alcohol addict begins to *rationalize his drinking behaviour* (9): he produces the well-known alcoholic "alibis". He finds explanations which convince him that he did not lose control, but that he had a good reason to get intoxicated and that in the absence of such reasons he is able to handle alcohol as well as anybody else. These rationalizations are needed primarily for himself and only secondarily for his family and associates. The rationalizations make it possible for him to continue with his drinking, and this is of the greatest importance to him as he knows no alternative for handling his problems.

This is the beginning of an entire "system of rationalizations" which progressively spreads to every aspect of his life. While this system largely originates in inner needs, it also serves to counter *social pressures* (10) which arise at the time of the "loss of control". At this time, of course, the drinking behaviour becomes conspicuous, and the parents, wife, friends, and employer may begin to reprove and warn the drinker.

In spite of all the rationalizations there is a marked loss of self-esteem, and this of course demands compensations which in a certain sense are also rationalizations. One way of compensation is the *grandiose behaviour* (11) which the addict begins to display at this time. Extravagant expenditures and grandiloquence convince him that he is not as bad as he had thought at times.

The rationalization system gives rise to another system, namely the "system of isolation". The rationalizations quite naturally lead to the idea that the fault lies not within himself but in others, and this results in a progressive withdrawal from the social environment. The first sign of this attitude is a *marked aggressive behaviour* (12).

Inevitably, this latter behaviour generates guilt. While even in the prodromal period remorse about the drinking arose from time to time, now *persistent remorse* (13) arises, and this added tension is a further source of drinking.

In compliance with social pressures the addict now goes on *periods of total abstinence* (14). There is, however, another modus of control of drinking which arises out of the rationalizations of the addict. He believes that his trouble arises from his not drinking the right kind of beverages or not in the right way. He now attempts to control his troubles by *changing the pattern of his drinking* (15), by setting up rules about not drinking before a certain hour of the day, in certain places only, and so forth.

The strain of the struggle increases his hostility towards his environment and he begins to *drop friends* (16) and *quit jobs* (17). It goes without saying that some associates drop him and that he loses some jobs, but more frequently he takes the initiative as an anticipatory defence.

The isolation becomes more pronounced as his entire *behaviour becomes alcohol-centred* (18), i.e., he begins to be concerned about how activities might interfere with his drinking instead of how his drinking may affect his activities. This, of course, involves a more marked egocentric outlook which leads to more rationalizations and more isolation. There ensues a *loss of outside interests* (19) and a *reinterpretation of interpersonal relations* (20) coupled with *marked self-pity* (21). The isolation and rationalizations have increased by this time in intensity and find their expression either in contemplated or actual *geographic escape* (22).

Under the impact of these events, a *change in family habits* (23) occurs. The wife and children, who may have had good social activities, may withdraw for fear of embarrassment or, quite contrarily, they may suddenly begin intensive outside activities in order to escape from the home environment. This and other events lead to the onset of *unreasonable resentments* (24) in the alcohol addict.

The predominance of concern with alcohol induces the addict to *protect his supply* (25), i.e., to lay in a large stock of alcoholic beverages, hidden in the most unthought-of places. A fear of being deprived of the most necessary substance for his living is expressed in this behaviour.

*Neglect of proper nutrition* (26) aggravates the beginnings of the effects of heavy drinking on the organism, and frequently the *first hospitalization* (27) for some alcoholic complaint occurs at this time.

One of the frequent organic effects is a *decrease of the sexual drive* (28) which increases hostility towards the wife and is rationalized into her extra-marital sex activities, which gives rise to the well-known *alcoholic jealousy* (29).

By this time remorse, resentment, struggle between alcoholic needs and duties, loss of self-esteem, and doubts and false reassurance have so disorganized the addict that he cannot start the day without steadying himself with alcohol immediately after arising or even before getting out of bed. This is the beginning of *regular matutinal drinking* (30), which previously had occurred on rare occasions only.

This behaviour terminates the crucial phase and foreshadows the beginnings of the chronic phase.

During the crucial phase intoxication is the rule, but it is limited to the evening hours. For the most part of this phase drinking begins sometime in the afternoon and by the evening intoxication is reached. It should be noted that the "physical demand" involved in the "loss of control" results in continual rather than continuous drinking. Particularly the "matutinal drink" which occurs towards the end of the crucial phase shows the continual pattern. The first drink at rising, let us say at 7 a.m., is followed by another drink at 10 or 11 a.m., and another drink around 1 p.m., while the more intensive drinking hardly starts before 5 p.m.

Throughout, the crucial phase presents a great struggle of the addict against the complete loss of social footing. Occasionally the after-effects of the evening's intoxication cause some loss of time, but generally the addict succeeds in looking after his job, although he neglects his family. He makes a particularly strong effort to avoid intoxication during the day. Progressively, however, his social motivations weaken more and more, and the "morning drink" jeopardizes his effort of complying with his vocational duties as this effort involves a conscious resistance against the apparent or real "physical demand" for alcohol.

The onset of the "loss of control" is the beginning of the "disease process" of alcohol addiction which is superimposed over the excessive symptomatic drinking. Progressively, this disease process undermines the morale and the physical resistance of the addict.

#### *The chronic phase*

The increasingly dominating role of alcohol, and the struggle against the "demand" set up by matutinal drinking, at last break down the resistance of the addict and he finds himself for the first time intoxicated in the day-time and on a week-day and continues in that state for several days until he is entirely incapacitated. This is the onset of *prolonged intoxications* (31) referred to in the vernacular as "benders".

This latter drinking behaviour meets with such unanimous social rejection that it involves a grave social risk. Only an originally psychopathic personality or a person who has later in life undergone a psychopathological process would expose himself to that risk.

These long-drawn-out bouts commonly bring about *marked ethical deterioration* (32) and *impairment of thinking* (33) which, however, is not irreversible. True *alcoholic psychoses* (34) may occur at this time, but in not more than 10% of all alcoholics.

The loss of morale is so heightened that the addict *drinks with persons far below his social level* (35) in preference to his usual associates — perhaps as an opportunity to appear superior — and, if nothing else is available, he will *take recourse to "technical products"* (36) such as bayrum or rubbing alcohol.

A *loss of alcohol tolerance* (37) is commonly noted at this time. Half of the previously required amount of alcohol may be sufficient to bring about a stuporous state.

*Indefinable fears* (38) and *tremors* (39) become persistent. Sporadically these symptoms occur also during the crucial phase, but in the chronic phase they are present as soon as alcohol disappears from the organism. In consequence the addict "controls" the symptoms through alcohol. The same is true of *psychomotor inhibition* (40), the inability to initiate a simple mechanical act — such as winding a watch — in the absence of alcohol.

The need to control these symptoms of drinking exceeds the need of relieving the original underlying symptoms of the personality conflict, and the *drinking takes on an obsessive character* (41).

In many addicts, approximately 60%, some *vague religious desires develop* (42) as the rationalizations become weaker. Finally, in the course of the frequently prolonged intoxications, the rationalizations become so frequently and so mercilessly tested against reality that the entire *rationalization system fails* (43) and the addict admits defeat. He now becomes spontaneously accessible to treatment. Nevertheless, his obsessive drinking continues as he does not see a way out.

Formerly it was thought that the addict must reach this stage of utter defeat in order to be treated successfully. Clinical experience has shown, however, that this "defeat" can be induced long before it would occur of itself and that even incipient alcoholism can be intercepted. As the latter can be easily recognized it is possible to tackle the problem from the preventive angle.

#### *The "alcoholic personality"*

The aggressions, feelings of guilt, remorse, resentments, withdrawal, etc., which develop in the phases of alcohol addiction, are largely consequences of the excessive drinking, but at the same time they constitute sources of more excessive drinking.

In addition to relieving, through alcohol, symptoms of an underlying personality conflict, the addict now tends to relieve, through further drinking, the stresses created by his drinking behaviour.

By and large, these reactions to excessive drinking — which have quite a neurotic appearance — give the impression of an “alcoholic personality”, although they are secondary behaviours superimposed over a large variety of personality types which have a few traits in common, in particular a low capacity for coping with tensions. There does not emerge, however, any specific personality trait or physical characteristic which inevitably would lead to excessive symptomatic drinking. Apart from psychological and possibly physical liabilities, there must be a constellation of social and economic factors which facilitate the development of addictive and non-addictive alcoholism in a susceptible terrain.

#### *The non-addictive alcoholic*

Some differences between the non-addictive alcoholic and the alcohol addict have been stated *passim*. These differences may be recapitulated and elaborated, and additional differential features may be considered.

The main difference may be readily visualized by erasing the large bars of the diagram (see fig. 1). This results in a diagram which suggests a progressive exacerbation of the use of alcohol for symptom relief and of the social and health consequences incumbent upon such use, but without any clear-cut phases.

The pre-alcoholic phase is the same for the non-addictive alcoholic as for the alcohol addict, i.e., he progresses from occasional to constant relief of individual symptoms through alcohol.

The behaviours which denote that alcohol has become a drug rather than an ingredient of a beverage (symptoms 2 to 6) occur also in the non-addictive drinker, but, as mentioned before, the “alcoholic palimpsests” occur rarely and only after overt intoxication.

“Loss of control” is not experienced by the non-addictive alcoholic, and this is the main differentiating criterion between the two categories of alcoholics. Initially, of course, it could not be said whether the drinker had yet reached the crucial phase, but after ten or twelve years of heavy drinking without “loss of control”, while symptoms 2 to 6 were persistent and “palimpsests” were rare and did not occur after medium alcohol intake, the differential diagnosis is rather safe.

The absence of “loss of control” has many involvements. First of all, as there is no inability to stop drinking within a given situation there is no need to rationalize the inability. Nevertheless, rationalizations are developed for justifying the excessive use of alcohol and some neglect of

the family attendant upon such use. Likewise, there is no need to change the pattern of drinking, which in the addict is an attempt to overcome the "loss of control". Periods of total abstinence, however, occur as a response to social pressure.

On the other hand, there is the same tendency towards isolation as in the addict, but the social repercussions are much less marked as the non-addictive alcoholic can avoid drunken behaviour whenever the social situation requires it.

The effects of prolonged heavy drinking on the organism may occur in the non-addictive alcoholic too; even delirium tremens may develop. The libido may be diminished and "alcoholic jealousy" may result.

Generally, there is a tendency towards a progressive dominance of alcohol resulting in greater psychological and bodily effects. In the absence of any grave initial psychopathy, however, the symptoms of the chronic phase as seen in addicts do not develop in the non-addictive alcoholic. In the presence of grave underlying psychopathies a deteriorative process is speeded up by habitual alcoholic excess, and such a non-addictive drinker may slide to the bottom of society.

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