

[WHO/HFD/9]  
10 February 1949

## EXPERT COMMITTEE ON HABIT-FORMING DRUGS

### REPORT ON THE FIRST SESSION

*Held 24-29 January 1949, Palais des Nations, Geneva<sup>1</sup>*

#### Members

- Dr. J. J. Bouquet, ex-Pharmacien des Hôpitaux et ex-Inspecteur des Pharmacies de Tunisie, Tunis
- Dr. N. B. Eddy, Principal Pharmacologist, Division of Physiology, National Institutes of Health (US Public Health Service), Bethesda, Md., USA
- Dr. J. R. Nicholls, Deputy Government Chemist, Government Laboratory, London, United Kingdom
- Dr. P. O. Wolff, Buenos Aires, Argentina

#### Absent

- Dr. H. P. Chu, Professor of Pharmacology, National Medical College, Shanghai, China

#### Secretary

- Dr. R. Gautier, Assistant Director-General, WHO

#### Observers

- Mr. L. F. Atzenwiler, Assistant-Secretary, Permanent Central Opium Board and Drug Supervisory Body, United Nations

Mr. A. E. Felkin, Secretary, Permanent Central Opium Board and Drug Supervisory Body, United Nations

Mr. V. Pastuhov, Chief of Section, Division of Narcotic Drugs, United Nations

Dr. H. Fischer, Professor of Pharmacology, University of Zürich, Switzerland, attended part of the session (25-26 January) in his capacity of member of the Permanent Central Opium Board and of the Drug Supervisory Body.

The agenda having been adopted, Dr. Eddy was elected Chairman, and Dr. Wolff Rapporteur.

#### 1. Request from the French Government regarding "valbine"

The question whether the preparation "valbine"<sup>2</sup> was to be exempted from the provisions of the 1925 Convention was discussed, special stress being laid on the content of dihydroxycodeinone hydrochloride, the possibility of recovering this alkaloid from the preparation, the presence of phenylethylmalonylurea, and whether the number of tablets contained in a tube was such that, taken simultaneously by an addict, they could maintain his state of addiction.

The following resolution was passed:

The committee,

Having considered a request from the French Government to have the preparation valbine exempted from the provisions of the 1925 Convention by application of its Article 8,

IS OF THE OPINION that such exemption should not be granted in favour of valbine, and

RECOMMENDS that this decision be notified to the Economic and Social Council of the United Nations for transmission to the French Government.

#### <sup>2</sup> Composition of valbine:

Dihydroxycodeinone hydrochloride . . . . .	1 mg.
Phenylethylmalonylurea . . . . .	3 cg.
Extractum piscidae . . . . .	2 cg.
Extractum pruni Virginianae . . . . .	3 cg.
Extractum Crataegi . . . . .	5 cg.
per tablet.	

<sup>1</sup>The Executive Board, at its third session, considered and adopted the report of the first session of the Expert Committee on Habit-forming Drugs, and authorized its publication.

It was decided to refer this report to the Economic and Social Council.

The Board also recommended: (1) that steps should be taken to secure information in the various countries on the use or dispensability of diacetylmorphine, through public-health administrations, the World Medical Association and other appropriate agencies and that an expert be sent to countries where the consumption of diacetylmorphine is high, and (2) that a mechanism should be established for giving a single name to every habit-forming drug subject to international control.

The Director-General was authorized to give effect to these recommendations if funds proved available in 1949, and it was agreed that recommendation (2) above should be referred to the Expert Committee on the Unification of Pharmacopoeias." *Off. Rec. World Hlth Org.* 17, 15

**2. Notifications by the Governments of the United States of America and of the United Kingdom concerning "metopon"**

The committee considered the notifications from the Governments of the United States of America and of the United Kingdom as to the habit-forming properties of methylhydromorphone hydrochloride (metopon hydrochloride).

On the basis of the observations made in both countries mentioned above, the committee adopted the following resolution :

The committee,

Having considered notifications from the Governments of the United States of America and of the United Kingdom in regard to methylhydromorphone hydrochloride (metopon hydrochloride) under Article II of the 1931 Convention,

IS OF THE OPINION that methylhydromorphone and its salts are habit-forming drugs, and

RECOMMENDS that this opinion be notified to the Secretary-General of the United Nations under the provisions of Article II, paragraphs 3 and 5. of the 1931 Convention.

**3. Notification Received from the Belgian Government Regarding Acetyldihydrocodeine hydrochloride (trade name : "acetylcodeine")**

The committee considered a notification received from the Belgian Government with respect to acetyldihydrocodeine ( $C_{18}H_{22}O_4N$  ( $O.CO.CH_3$ ) HCl +  $H_2O$ ).

The committee has no specific information on the habit-forming property of acetyldihydrocodeine, but is of the opinion that this substance is convertible to dihydrocodeine which, in turn, is convertible to dihydromorphone, a habit-forming drug. The statement with respect to conversion to a habit-forming drug applies equally to other esters of dihydrocodeine and their salts, and also to dihydrocodeine and its salts.

The committee

RECOMMENDS that the committee's opinion that dihydrocodeine, its esters and their salts, are convertible to dihydromorphone, a habit-forming drug, should be communicated to the Secretary-General of the United Nations.

**4. Protocol signed in Paris on 19 November 1948**

The committee noted that this Protocol, although not having yet received the necessary number of final signatures, is expected to enter into force in the very near future. Therefore, for practical purposes, the committee decided to proceed as if this Protocol were actually in force.

**5. 1-Methyl-4-phenyl-piperidine-4-carboxylic acid ethyl ester (the hydrochloride of which is known under the names of "dolantin", "demerol", "pethidine", "piridosal", etc.)**

The committee was informed of the steps taken in May 1945 by the President of the Council of the League of Nations to have 1-methyl-4-phenyl-piperidine-4-carboxylic acid ethyl ester subjected to the measures of control provided in the 1925 Convention.

The committee considered, however, that the supervision thus exercised is not sufficient to ensure the international control of such a powerful habit-forming drug, and therefore adopted the following resolution :

The committee

IS OF THE OPINION that, by virtue of Article I, paragraph 2, of the Protocol of 1948, 1-methyl-4-phenyl-piperidine-4-carboxylic acid ethyl ester and its salts should be considered as capable of producing addiction and should therefore fall under Article I, paragraph 2, Group I of the 1931 Convention, and

RECOMMENDS that this opinion be notified to the Secretary-General of the United Nations.

**6. Other Substances of the "Pethidine" Type**

After having expressed its opinion on 1-methyl-4-phenyl-piperidine-4-carboxylic acid ethyl ester (item 5), the committee believed that the onus was upon it to consider also the many other substances of similar structure known at present, and to which reference is made in memoranda by Professor Fischer<sup>3</sup> and Dr. Wolff.<sup>4</sup>

From the evidence before it,

The committee

IS OF THE OPINION that

- 1-methyl-4-methoxyphenyl-piperidine-4-carboxylic acid ethyl ester ("bemidone")
- 1-methyl-4-methoxyphenyl-4-propionyl-piperidine ("keto-bemidone")
- 4-1,3-dimethyl-4-phenyl-4-propionoxy-piperidine (NU-1196)
- β-1,3-dimethyl-4-phenyl-4-propionoxy-piperidine (NU-1779)

are all substances of similar chemical structure (pethidine type) and definitely habit-forming,<sup>5</sup> and should be noted for appropriate action when the Protocol of 19 November 1948 comes into force, and

RECOMMENDS that this opinion be notified to the Secretary-General of the United Nations.

**7. 6-Dimethylamino-4,4-diphenyl-3-heptanone and Substances of Similar Type**

From the evidence before it,

The committee

IS OF THE OPINION that the following synthetic drugs :

- 6-dimethylamino-4,4-diphenyl-3-heptanone ("methadone", "amidone", etc.)

<sup>3</sup> UN document E/OB/3 Rev. 1

<sup>4</sup> To be published in *Bull. World Health Org.* 1949. 2

<sup>5</sup> See Annex 1, page 32

- 6-dimethylamino-5-methyl-4,4-diphenyl-3-hexanone (*iso*-methadone) <sup>1</sup>
- 6-dimethylamino-4,4-diphenyl-3-heptanol <sup>2</sup>
- 6-dimethylamino-4,4-diphenyl-3-acetoxyheptane <sup>3</sup>
- 6-morpholino-4,4-diphenyl-3-heptanone (C.B.II) <sup>4</sup>
- should definitely be considered as habit-forming,<sup>6</sup> and should be noted for appropriate action when the Protocol of 19 November 1948 comes into force, and

RECOMMENDS that this opinion be notified to the Secretary-General of the United Nations.

### 8. Precautionary Measures with Regard to Synthetic Substances

The committee is of the opinion that other compounds of a structure similar to those referred to under item 6 (pethidine type) and item 7 (methadone type) must be under suspicion as to their having habit-forming properties until the contrary be proved. The committee considers that governments should watch these compounds with extreme care and should take appropriate action immediately on the discovery of the addicting properties of any one of them.

With reference to the experience already gained with some members of the pethidine and methadone groups,

The committee

RECOMMENDS that provision should be made in any new convention whereby substances of a particular chemical type, analogues of which have been proved to be habit-forming, could be placed under control until such time as they are shown not to be habit-forming.

### 9. Diacetylmorphine

The committee, having noted the views expressed by the Permanent Central Opium Board and the Drug Supervisory Body on the question of diacetylmorphine, considered the increase in the figure of consumption of this substance in some of the countries mentioned in the report of the Permanent Central Opium Board on statistics of narcotics for 1947.<sup>7</sup> Reference was also made to Recommendation VI of the 1931 Convention which was based on the view expressed by the committee of experts of the conference for the limitation of the manufacture of narcotic drugs (1931), and which emphasized "the highly dangerous character of diacetylmorphine as a drug of addiction and the possibility in most, if not all, cases of replacing it by other drugs of a less dangerous character".

Having heard a statement by Professor Fischer<sup>8</sup> with which it fully agreed, the committee expressed a feeling of alarm over the existing situation with regard to diacetylmorphine, and stressed

<sup>6</sup> See Annex 1, page 32

<sup>7</sup> UN document E/OB.4

<sup>8</sup> See Annex 2, page 33

the fact that there are 24 countries in which diacetylmorphine is not used at all.<sup>9</sup>

The committee is of the opinion that further information is urgently needed as to the reasons governing the present use of diacetylmorphine in some countries, particularly with regard to its possible dispensability. Such data might be secured through the good offices of the World Medical Association. In addition, direct inquiries might be undertaken by the sending of an expert to countries where the consumption of diacetylmorphine is high, in order to ascertain from local physicians and hospital and sickness insurance services the reasons for the prescribing of this drug. The following resolution was adopted:

The committee

RECOMMENDS that steps should be taken to secure information on the use or dispensability of diacetylmorphine in the various countries through the World Medical Association and by sending an expert to countries where the consumption of diacetylmorphine is high.

### 10. Other Synthetic Substances

#### 10.1 3-hydroxy-N-methyl morphinan

The attention of the committee was drawn to the fact that German and Swiss chemists have produced by direct synthesis a compound known as 3-hydroxy-N-methyl morphinan, in which the structure of naturally occurring morphine alkaloid has been nearly attained.<sup>10</sup> The new compound differs from morphine chemically only in the absence of the oxygen bridge and of the alcoholic hydroxyl in position 6. It has been shown in the laboratory to possess marked analgesic action, greater than that of morphine itself, and to exhibit many of the other characteristics of morphine action.

The synthesis of 3-hydroxy-N-methyl morphinan is difficult and at the moment probably not commercially feasible. Nevertheless, synthesis of related compounds is going forward and the committee is of the opinion that progress in this field must be watched very carefully.

#### 10.2 Amphetamine

The committee heard a statement by Dr. Wolff on the widespread use of amphetamine and related substances and the consequences of their abuse which had already resulted in provision of certain national measures of control.

The committee, having considered the question of the widespread use of amphetamine and related substances, expressed concern in regard to the possible abuse resulting from these drugs. The

<sup>9</sup> Austria, Bulgaria, Brazil, Chile, China, Colombia, Costa Rica, Cuba, Dominican Republic, Egypt, Greece, Guatemala, Honduras, Japan, Liberia, Luxemburg, Mexico, Nicaragua, Peru, Poland, Salvador, Spain, United States of America, Venezuela

<sup>10</sup> See Growe, R. (1946) *Naturwissenschaften*, **33**, 333; *Angew. Chem.* 1947, **59**, 194

committee considered, however, that recommendations in regard to the international control of these substances were not appropriate at this stage.

#### 11. Names of Drugs Subject to Control

Every drug which is subjected to control must be clearly described so that there is no doubt regarding its identity. New drugs may be introduced under registered trade names, and subsequently be given different registered trade names by other manufacturers. The committee has been impressed by the variety of names given to some of the drugs with which it has dealt in this report. To avoid ambiguity it has been necessary to give the full chemical name of these substances. The committee is of the opinion that there would be considerable advantage from both the administrative and the user's point of view if each of these substances, and any other subsequently introduced, could be given a recognized name by some authoritative body. This body should preferably be international and independent. Therefore,

The committee

RECOMMENDS that a mechanism should be established whereby every habit-forming drug

subject to international control can be given a single name to be used for all international purposes.

#### 12. Memorandum from Dr. H. C. Connell

The committee noted the above memorandum on the advantages of calcium gelatinate as a vehicle for morphine and sedatives in general.<sup>11</sup>

#### 13. Monographs of the Expert Committee on the Unification of Pharmacopoeias on Habit-forming Drugs

At its second and third sessions,<sup>12</sup> the Expert Committee on the Unification of Pharmacopoeias of the World Health Organization decided to consult with the Expert Committee on Habit-forming Drugs on all monographs relating to narcotic drugs, and to obtain the formal approval of this committee on such monographs.

The Expert Committee on Habit-forming Drugs agreed that such monographs could be transmitted by correspondence to its members for their comments.

<sup>11</sup> Document WHO/HFD/4, unpublished working document

<sup>12</sup> For reports, see *Off. Rec. World Hlth Org.* 11, 63; 15, 41

### Annex I

#### EVIDENCE ON THE ADDICTION POTENTIALITY OF COMPOUNDS OF THE DOLANTIN AND METHADONE TYPES

Note by Dr. N. B. Eddy

The Research Department of the US Public Health Service Hospital at Lexington, Ky., USA, has carried out tests on the addiction potentiality of new synthetic substances of the "demerol" and "methadone" types<sup>13</sup> including the following, as yet unpublished:

1. *1-methyl-4-methoxyphenyl-piperidine-4-carboxylic acid ethyl ester* ("bemidone")

This substance is practically identical with demerol in the reactions which it produces and in the dosage required to produce euphoria in post-addicts or to suppress abstinence phenomena of an established morphine addiction. Its addiction potentiality then is considered to be very like that of demerol itself.

2. *1-methyl-4-methoxyphenyl-4-propionyl-piperidine* ("keto-bemidone")

In single dose, this substance produces intense euphoria in former morphine addicts. It readily

suppresses abstinence phenomena of an established morphine addiction. The behaviour of men experimentally addicted to keto-bemidone is very similar to the behaviour of men addicted to morphine. Tolerance developed to sedative action, the effect on the electroencephalogram, the emetic effect and the effect on the thermal radiation pain threshold. Following abrupt withdrawal of keto-bemidone after administration for 42 to 60 days, an abstinence syndrome developed very rapidly (in less than 10 hours) which was so intense as to be regarded as potentially dangerous to life, and which declined rapidly.

The evidence is unequivocal that keto-bemidone produces a type of addiction which is very similar to addiction to the drugs of the morphine series and which is so great that the drug should not be used in clinical medicine unless it can be shown to possess great advantage over the potent analgesics already available.

This evidence has been presented to the Commissioner of Narcotics of the United States of America and to the manufacturers who hold the

<sup>13</sup> *J. Amer. med. Ass.* 1947, 135, 888; *Proc. N. Y. Acad. Sci.* 1948, 51, 1

patent on keto-bemidone. The latter have as a result voluntarily suspended production of keto-bemidone and plans for its marketing.

3. and 4. *α-1,3-dimethyl-4-phenyl-4-propionyloxy-piperidine* and *β-1,3-dimethyl-4-phenyl-4-propionyloxy-piperidine* (NU-1196 and NU-1779)

Both of these substances are more effective than demerol in the production of euphoria in post-addicts and in the suppression of abstinence of an established morphine addiction. The *α*-isomer is twice as effective, the *β*-isomer three or four times as effective as demerol in these respects. Both, then, are considered to have greater addiction potentiality than demerol.

5. *6-dimethylamino-4,4-diphenyl-3-heptanol*

This substance has not produced euphoria in post-addicts in the doses administered (90 mg.-120 mg.), and has only very slight effect on the abstinence phenomena of an established morphine addiction. It also has very weak analgesic action. Its addiction potentiality appears to be low.

6. *6-dimethylamino-4,4-diphenyl-3-acetoxy-heptane*

In this substance an hydroxyl group has been acetylated as in the change from morphine to heroin. In consequence, analgesic action has been increased at least as much as in methadone. The compound produces marked euphoria in post-addicts and readily suppresses the abstinence phenomena of an established addiction. It is considered to have an addiction potentiality as great as or greater than methadone.

7. *6-morpholino-4,4-diphenyl-3-heptanone* (C.B. II)

Small doses (15 mg.-20 mg.) produce an intense but not long lasting euphoric reaction in post-addicts; larger doses cause a severe toxic circulatory reaction. Small doses markedly reduce the intensity of abstinence phenomena of morphine addicts, but these phenomena return to their former intensity in two hours. This compound is considered to have a strong addiction potentiality, as great, probably, as that of methadone.

## Annex 2

### DIACETYLMORPHINE

(Heroin)

*Memorandum by Professor H. Fischer*

The danger constituted by heroin is nowadays undisputed. Widespread heroin addiction in New York between 1912 and 1920, and the perilous years between 1920 and 1930 in Egypt (Russell Pasha) are cases in point. Because of few or inadequate control measures, heroin production flourished, and illicit trade in this product was exploited to a remarkable degree of efficiency by contraband dealers, even after the entry into force of the Conventions of 1925 and 1931. From that time onwards, the unlawful production of heroin grew by leaps and bounds in China, partly with the help of European chemists. Ever increasing imports of acetic anhydride were a clear indication of the proportions assumed in that country by heroin production, which amounted to dozens of tons per year.

The heroin-smoking habit introduced in China was a particularly pernicious form of heroin addiction (dragon brand, etc.). During this period, the production of diacetylmorphine oscillated between 10, 20 and *x* tons per year. It is a known fact that, at the time of the Japanese invasion (1933 to 1935), Japan made great efforts to supply Manchukuo and Jehol with narcotics, including not only opium for smoking purposes, but also heroin. During the second World War, Japan used heroin as a weapon in carrying out its genocidal policy in Manchukuo. You will no doubt recall the Mukden factory, whose production of diacetylmorphine reached 50 tons annually.

It would seem logical to ban completely the use of a poisonous drug which has wreaked such havoc throughout the world during the last 50 years. The Convention of 1931 was designed for this purpose, but only a few countries adhered to its stipulations. In this regard the United States has

scrupulously carried out its obligations for the past 20 years. From a medical point of view, heroin should continue to be used only if its value as a drug can be proved; that is, if no other drug can fulfil the same purposes, and it should at least have definite therapeutic qualities. In my opinion, none of the aforementioned conditions is fulfilled by this drug.

As a matter of fact, heroin is generally considered as an extremely dangerous drug. Most doctors and hospitals refrain from using it, and would no doubt agree to its complete elimination throughout the world. In spite of this, we find ourselves today in the presence of a situation which is both anomalous and disquieting. In certain countries, doctors are prescribing heroin with ever increasing frequency, and in Finland, in particular, there is cause for alarm.

For doctors, the increased use of heroin in various countries is difficult to understand, as the opinion of the medical body throughout the world is unanimous as to the harmful nature of heroin, both from a medical and narcotic viewpoint.

#### *Diacetylmorphine and its properties*

Generally speaking, diacetylmorphine is more toxic than morphine, as the resultant analgesic effect is from four to eight times more powerful. Its sedative and paralytic effect on the respiratory system is much greater than that produced by morphine, as 0.007 g. of diacetylmorphine is sufficient to bring on respiratory paralysis. Diacetylmorphine is prescribed for the same specific purposes as morphine: for painful conditions, including those causing insomnia and, above all, for irritations of the respiratory tract, more particularly those encountered in pulmonary tubercu-

losis and in cases of tuberculosis of the larynx. Diacetylmorphine is contra-indicated when dealing with emphysema, asthma and heart trouble.

The elimination of heroin is directly related to the prescriptions made by doctors. Heroin can be prescribed for cough conditions and irritations in the respiratory tract, as for example, in pulmonary tuberculosis and in cases of tuberculosis of the larynx, but to a lesser degree as a central analgesic. In other words, the specific medical uses of diacetylmorphine are not to be distinguished from those of other analgesics used in cough conditions, such as morphine, accedione, eucodal, dilaudide, permonide, and dicodide.

As a cough remedy, there is consequently no medical justification for preferring diacetylmorphine to other drugs, or of even placing it in the same category. Possible repercussions on the respiratory tract and the ease and rapidity with which addiction can be acquired, are factors which clearly indicate that it cannot be considered as useful as the above-mentioned drugs.

As is indicated in the report submitted by the Permanent Central Opium Board to the Economic and Social Council on the work accomplished by the Board in 1948,<sup>14</sup> there are five countries whose consumption of diacetylmorphine reached 2 kg. per million inhabitants and five other countries where over 5 kg. were consumed. In order of highest consumption, these countries are: Italy, New Zealand, Sweden, Australia, and Canada. One country (Finland) uses more than 25 kg. of diacetylmorphine per million inhabitants. In contrast, among the 74 countries and 96 colonies and territories mentioned, 25 countries and 27 territories have not made provision for diacetylmorphine in 1949.

The following are some of the countries not using diacetylmorphine: United States, Japan, Austria, Bulgaria, Hungary, Spain, Poland, Mexico, Brazil and Egypt.

I heartily commend the WHO Expert Committee on Habit-forming Drugs for having included in its present programme of work the question of diacetylmorphine, which is a matter of serious concern to the Permanent Central Opium Board as well as to the Drug Supervisory Body. Neither the Permanent Central Opium Board nor the Drug Supervisory Body sees the necessity or even the utility of increasing the consumption of heroin in Finland, Italy and other countries, for reasons which have been put forward by doctors in those countries. If, in Finland, sickness insurance organizations encourage the use of heroin because doses are smaller than the corresponding morphine or codeine doses, and are consequently cheaper, a doctor who is aware of his responsibilities should not consider this fact as sufficient justification for administering heroin in such alarming proportions.

The Permanent Central Opium Board and the Drug Supervisory Body would consider it most desirable to have this problem elucidated as soon as possible by the WHO expert committee. The supervision of international trading in diacetylmorphine would thereby be greatly facilitated, and the committees which are entrusted with this

task could only profit from a serious study of this question.

As public-health problems are involved, the Opium Board and the Supervisory Body are agreed that the WHO expert committee should take care of this matter.

Available information proves beyond doubt that the use of diacetylmorphine for medical purposes cannot be solely considered as a sequel to the war.

If the WHO expert committee, after having thoroughly examined the problem of diacetylmorphine, were to arrive at the conclusion that, both from a medical point of view and from that of public health throughout the world, it would be advisable to eliminate completely diacetylmorphine, such a conclusion would be of the greatest importance for the aforementioned control bodies. If one considers that 25 States and 27 territories have already given up the use of diacetylmorphine for medical purposes, such a recommendation by the Permanent Central Opium Board and the Drug Supervisory Body would not seem too much to hope for. A recommendation on these lines had already been presented as Resolution VI of the Convention of 1931, the text of which is as follows:

"The Conference, recognizing the highly dangerous character of diacetylmorphine as a drug of addiction and the possibility in most, if not all, cases of replacing it by other drugs of a less dangerous character;

RECOMMENDS that each government should examine in conjunction with the medical profession the possibility of abolishing or restricting its use, and should communicate the results of such examination to the Secretary-General of the League of Nations."

If one takes into consideration the harm brought about in the world by diacetylmorphine since its appearance, and the thousands of heroin addicts who have fallen victims to the drug, the disappearance of diacetylmorphine from world markets could only be considered as a boon and a step in the right direction. Moreover, a complete ban on the production of diacetylmorphine would greatly facilitate the supervision of narcotics, as control bodies could rightly conclude that heroin discovered anywhere in the world could only be contraband, and even the possession of this dangerous product would constitute an infringement of conventions.

It would be most desirable that the WHO expert committee make a study of this question at this time, as a new convention—the future Opium Convention—is being drawn up and is on the point of being presented to the various supervisory bodies for narcotics, and to governments.

In order to attain the required goal—the complete abolition of heroin—a scientifically and psychologically planned propaganda campaign should be inaugurated to convince doctors and governments the world over that the complete abolition of diacetylmorphine is an urgent necessity in the struggle to curtail the use of drugs which are a menace to public health.

<sup>14</sup> UN document E OB 4