



Organization of American States (OAS)  
Inter-American Drug Abuse Control Commission (CICAD)

**INTER-AMERICAN OBSERVATORY ON DRUGS (OID)**

**PROGRAM TO ESTIMATE THE HUMAN, SOCIAL, AND  
ECONOMIC COSTS OF DRUGS IN THE AMERICAS –  
RESEARCH MANUAL**

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**SEPTEMBER 2003**

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## **1. INTRODUCTION**

No one ignores that the abusive consumption of psychoactive substances (PAS) exert adverse impacts on the user's health and capacity to perform in society. Furthermore, many persons surrounding the abusive user are also affected, that is, members of his/her immediate family environment, friends, neighbors, colleagues and fellow workers, and by extension the entire community.

When society is considered as a whole, that is, the entire national economy, the adverse individual impacts stemming from the abusive consumption of psychoactive substances accumulate not only in terms of human well-being but also in social and economic terms. These negative consequences primarily manifest themselves by means of the following impacts:

### **a. Primary**

- **Conduct:** Problems stemming from abnormal behavior induced by the abuse: accidents, brawls, material damages by action or omission, crime, personal costs, and costs for the health system.
  
- **Family environment:** Family problems stemming from the consumption of psychoactive substances, such as domestic violence, sexual abuse, neglect and abandonment, frequent conflicts, poor communication.

- Productivity: Problems stemming from lower productivity of the user and his/her fellow workers who are affected by his behavior or absence, meaning economic costs.
- Health: Health problems not only for the user but also for other persons, medical costs, and for the health system.

**b. Secondary**

There are the social consequences of abuse that become apparent when the community has to appropriate additional resources (over and above those that might be needed under circumstances where there is no abuse) to tackle the accumulation of individual consequences and to limit the extent of present and future damage, to meet needs in various areas such as the following, which involve a cost for the health system:

- The provision of specialized treatment services to eliminate or reduce abuse.
- The provision of health care services for the user and for other persons affected as a result of accidents or aggression or as a result of congenital defects that can be attributed to substance abuse by the biological parents.
- Community protection by means of actions aimed at preventing accidents and limiting damages.

- Compensation for the loss of productivity.

When the predictable consequences of PAS abuse are considered, it is easy to understand that, when the impacts on individuals and the health system throughout the health system of a nation are added up, the resulting amounts, regardless of the origin of each one of them, are high. They definitely are high no matter how difficult it is to estimate accurately the magnitudes that might be involved. Because of this, it is very important, in any economic system, to control the social problem represented by the abusive use of PAS. It is indispensable, however, to learn about its characteristics to be able to determine the courses of action to be taken.

Frequently the reasons for which it is important to undertake studies on the costs of PAS abuse are neglected. It should therefore be recalled here that the resulting estimates, even when they are only rough estimates regarding the real magnitude of the problem, in addition to being indispensable for controlling resources and programs, mainly serve the following purposes:

- Justify the priority that should be given to the social problem of PAS abuse on the government's agenda because without any information about its economic impact, it is easy to postpone tackling the problem and allow it to be poorly managed.
- Identify with greater precision priority intervention areas, as well as concomitant policies to secure greater cost-effectiveness in the decision making.

- Detect gaps in statistical information and research needs in relevant areas for a greater/better understanding of the social problem, which in turn is indispensable to propose solutions in line with changing or emerging problems.

Cost studies can offer guidelines to measure the effectiveness of policies and programs aimed at controlling the social problem of PAS abuse and, to the extent that they manage to define some minimum standards permitting international comparisons, the results of the studies can facilitate comparing the effectiveness of the national policies of various countries. Thus, for example, comparative studies can provide useful information about whether, in terms of penalizing production and consumption, a more restrictive line of action might not be preferable to a more liberal one or whether, assuming identical other conditions, there might not be lesser abuse in those countries where a high share of the costs are borne by individuals than in those where more public funding is appropriated for this purpose.

In any country, studies on the costs of PAS abuse can contribute to building social cost functions that can help to determine the policy objectives aimed at improving the living conditions of the population as a whole. This is the origin and justification of studies on the social, in other words, the economic, costs of the abuse of psychoactive substances.

The present document intends to bring together, in the form of a practical methodological guide, the principal conclusions drawn by researchers in developed countries (mainly, Australia, Canada, Great Britain, and the United States) after



many years of experience in this area of study. It should be kept in mind, however, that the methods developed for these countries are not directly and entirely applicable to our Caribbean and Latin American nations, since we lack a tradition of careful gathering and maintenance of many data series that are indispensable for the immediate application of their models. Nevertheless, it is suggested here that it is possible to indirectly come close to characterizing the social phenomenon and measuring its implications for our respective national economies by using indicators. The raw material for calculating these indicators are the data that each country should be gathering periodically; its adequate use will permit not only the development of a culture of organizing databases but will also open up the possibility of making increasingly accurate cost calculations.

After reading the present Manual, it should be clear that what is being proposed here is a way to achieve the common objective of acquiring knowledge about a pertinent social problem that, to a greater or lesser degree and with different characteristics, is affecting all nations of the world. On the basis of the methods already developed by researchers and experience in the field by members of the technical advisory team, what is being proposed here is the hypothesis that it is possible to come up with mechanisms to come close to characterizing the phenomenon of abuse of psychoactive substances within the framework of our own conditions, and instructions are provided on how to proceed.

The result that is expected from the careful application of the guidelines proposed herein is a better knowledge of the problem, capable of being fine-tuned as more and better indirect indicators on the problem's evolution become available and on which public policy decisions regarding social security, fixed budgets and citizen

welfare can be based. There is no intention of examining the topic exhaustively, rather it is only a preliminary attempt, in the conviction that any serious approach to the study of a problem that is as important as the consequences of the abuse of psychoactive substances is a step in the right direction to find practical, and replicable solutions.

## **2. COST-OF-ILLNESS STUDIES AND ECONOMIC IMPACT OF ILLNESS**

Cost-of-illness studies pertain to a specific type of economic impact studies. They are aimed at increasing the degree of understanding about the nature and environment of a given disease, as well as its foreseeable consequences for society as a whole.

In the specific case of studies on the economic impact of psychoactive substance abuse, it essentially involves estimating the social costs that are incurred by a collectivity at a given time, compared to the hypothetical situation where there is no such abuse. This hypothetical situation is usually called “counterfactual” precisely because it is contrary to the facts of reality.

Social costs consist mainly of the sum of all the resources aimed at providing specialized treatment, general health care, and prevention, investigation, and the law enforcement and justice system. To all of the above should be added production losses as a result of disease and some monetary equivalent of the quality of life that has been sacrificed.

To make the necessary estimates, cost-of-illness studies should combine epidemiological data that make it possible to learn about the characteristics of the problem, with financial information about the costs involved in its treatment and prevention, as well as the repair of the social damage coming from the same illness. The measurement can be conducted by having the analyst focus on the past (prevalence-studies based) or on the future (incidence-based studies).

The terms prevalence and incidence are drawn from the field of epidemiology. Prevalence is aimed at determining the total number of cases of a disease or disorder in the population at a given time (for example, how many marijuana addicts there are in a given year in a country, regardless of when they became addicts). Incidence, however, is interested in determining the number of new cases of a disease or disorder appearing in a given period (typically one year) for the purpose of determining the trend of its course of evolution.

From the above, it can be concluded that prevalence-based cost-of-illness studies attempt to estimate the social costs incurred, for any given year, by all the cases of abuse that are presumably found among the population, regardless of their time of onset. Incidence-based studies, however, estimate the costs incurred as a result of new cases appearing in any given year as of that time and in the future. Thus, it can be said that prevalence-based studies measure the costs of present and past abuse, whereas incidence-based studies measure the costs of present and future abuse.

Theoretically, it is to be expected that studies based on one or the other approach will yield approximately equivalent findings in those societies where the illness (in this case PAS abuse and its consequences) remains more or less stable in terms of general levels of persons affected by it. If the levels show a downward trend (as seems to be the case for tobacco consumption in some parts of the world) prevalence-based studies are expected to yield higher results. On the contrary, incidence-based results would be higher when the levels show an upward trend (as for the current consumption of illicit drugs in various nations).

In any case, the difficulty of obtaining the information that is indispensable for undertaking psychoactive substance abuse cost studies satisfactorily explains why only a few developed countries have actually undertaken these studies. Among these studies, the great majority are prevalence-based cost studies.

Cost-of-illness studies conducted to date in Australia, Canada, Great Britain, and the United States, among the pioneer countries in this field, have come up with notable differences in their estimates of resulting costs, which are evident not only when comparisons are made among the different countries but also when comparing the results obtained for the same countries in different years and by different research teams. Efforts have been made to explain that these differences are largely due to the use of different methodologies, not only for classifying costs but also for estimating them; this introduces external disruptive factors in characterizing a problem that is very complex to resolve without them.

In an effort to minimize distortions attributable to factors that are external to the problem, once the complexity of the topic of the study and the difficulty in obtaining basic statistical information have been accepted, for several decades now, the advisability of introducing some degree of standardization in terms of concepts and categories has been identified. In addition to contributing to the small achievement of having the analysts at least speak the same language, it facilitates direct comparisons between studies. As a result, in 1978 the U.S. Government, through its U.S. Public Health Service, set up a task force in charge of establishing methodological guidelines for the development of cost-of-illness (COI) studies, carried out or funded by this Service. The prominent expert Dorothy Rice headed

the task force. Later, in 1994, the Canadian Centre on Substance Abuse (CCSA) convened the First International Symposium on Estimating the Economic and Social Costs of Substance Abuse, which was held in Banff, Alberta. At that time it was agreed that a working group comprised of analysts from various nationalities and led by the Canadian expert Eric Single would be delegated to propose international guidelines. The first version of these guidelines appeared in 1995, and they were revised in 2001.<sup>1</sup>

In order to contribute to filling a gap prevailing in the field of cost-of-illness studies among the nations of the Americas other than Canada and the United States and on the basis of the mandate issued at the Summit of the Americas held in April 2001 in Quebec City, which instructed it *“to develop a long-term strategy that includes a three-year program to establish a basic and standardized mechanism to estimate the social, human and economic costs of the drug problem in the Americas and support the countries by providing them with the necessary technical assistance,”* the Organization of American States, through its Inter-American Drug Abuse Control Commission (CICAD), has proposed drawing up a methodology to help the continent’s countries to estimate the economic impact of psychoactive substance abuse.

For this purpose, the task of drawing up a simplified version of the Canadian and U.S. models has been accepted in the hope that it can offer credible and useful results on the basis of information that is more limited and less accurate than what the countries who created these models have at their disposal. According to OAS-

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<sup>1</sup> For further details on each model, please consult the following web sites: <http://www.drugabuse.gov/EconomicCosts/Index.htm> and <http://www.ccsa.ca/Costs/Guidelines/intguid.htm>

CICAD plans, in a first stage, we will develop, on the basis of simplified guidelines, cost-of-illness studies on psychoactive substance abuse in a synchronized fashion in four pilot countries (Barbados, Costa Rica, Mexico, and Uruguay). These countries have expressed their interest in testing the simplified methodology before their widespread use is recommended in the other countries.

The present document tries to summarize and adapt the methodological proposals for cost-of-illness studies on psychoactive substance abuse contained in the NIDA document entitled "*The Economic Costs of Alcohol and Drug Abuse in the United States - 1992*" whose complete version can be consulted at <http://www.drugabuse.gov/EconomicCosts/Index.htm>, as well as in the *International Guidelines for Estimating the Costs of Substance Abuse-Second Edition* published by the CSSA in <http://www.ccsa.ca/Costs/Guidelines/intguid.htm> (this is a suitable occasion to express appreciation to both institutions for their efforts to define a common basic methodology that is generally valid). As indicated, this is the point of departure for this guide, which is also expected to contribute to facilitating the adoption of the international methodology to establish PAS abuse costs in developing countries that have notable deficiencies in the quality and quantity of information available. This means that all the participating countries should start a permanent effort to systematically obtain relevant data to carry out cost calculations, so that these procedures can become habitual and part of a daily routine.



### **3. PSYCHOACTIVE SUBSTANCES (PAS)**

The countries that have conducted cost-of-illness studies on psychoactive substance abuse have usually acquired their investigative experience from studies about the consequences of alcohol and tobacco abuse. These two substances share the characteristics of being legally approved for consumption by the public and enjoying preference by the largest number of users in a wide universe of PAS consumers. Usually, studies about the abuse of other PAS that are not legal and therefore not as widespread do not make any major effort to differentiate between the different substances, in view of the lack of differentiated basic information. The substances that are different from alcohol and tobacco are usually grouped under “illicit drugs,” and information related to them are obtained indirectly on the basis of indicators.

Therefore, it is probably the lesser comparative difficulty of gaining access to indispensable basic information rather than the relative importance of the problem represented by the abusive consumption that explains why most countries have started their cost-of-illness studies with alcohol and tobacco. Nevertheless, it is an incontrovertible fact that costs related to the two substances that can be consumed legally far exceed the social costs from the abuse of psychoactive substances in all the economies where studies have been conducted.

It is important to bear in mind that each one of the PAS groups has its particularities, which can determine different strategies of approach to the problem of estimating the costs related to their abuse. For example, the fact that both tobacco and alcohol are taxed in many countries means that it is easy to find an

indicator for the size of the market in the registers of tax authorities (the problem of smuggling these substances in some countries should also be taken into account). Furthermore, regarding both substances, it is also expected that there are records about the morbidity and mortality associated to their consumption and/or abuse, because the treatment of the disease and its consequences are legally admissible.

The fact that alcohol is much more susceptible to being produced illegally than tobacco means there are difficulties in making estimates (although the figures for both substances are subject to adjustments to take smuggling into account). Moreover, because drunkenness triggers behaviors that tend to foster accidents with consequences in terms of damage to persons and things, the costs usually arising from its abuse are the highest; with tobacco, however, the situation is totally different.

Understandably, the illegal drug group is the hardest for which to calculate the cost, because its illegality makes it difficult to determine the size of the market for production or consumption. There are no tax, production or retail trade records. Moreover, producers, sellers, and consumers are not willing to identify themselves and provide information. Those who abuse illicit substances do not resort easily to specialized treatment nor do they admit they have consumed even when they have to be admitted to hospital for the consequences of abuse.

As a result of this situation, the basic information that can be obtained on illicit PAS may very well suffer from inevitable flaws that constrain their reliability, which requires careful management by investigators. The greater is the stringency for

handling data, the higher is the quality of the resulting product. Obviously, the factors of causality between abuse and consequences (also referred to as *attributable factors* or *etiologic factors*) that can be obtained in such circumstances will always be the result of inferences that are more or less plausible, based on indirect indicators affected by the same constraints and flaws as those of the basic information.

Despite its constraints, this kind of study is indispensable, because without these studies there can be no convincing overview of the magnitude of the problem. Even when its exact value is debatable, this information will be very valuable when it is time to take certain decisions; this may be obvious, but it is much better to have “some information” than “no information.” Because of this, it is suggested that each country should explore this terrain with small projects that can gradually increase their scope and importance.

#### **4. INDICATORS**

The virtual impossibility of learning directly about the characteristics of a social phenomenon such as PAS use and abuse, along with the general benefit that will undoubtedly come from having at least an estimate of these characteristics, makes it necessary to resort to the use of indicators as a source of indirect information to obtain an idea of the magnitude of the problem. Thus, for example, on the basis of the sales reported during a given period by the principal tobacco manufacturers in a country and the foreign trade records, along with the results of an investigation about the consumption habits of the population of smokers, the reality can be represented to try to infer likely economic consequences.

It is clear from the previous example that there is no intention to replace accurate information by approximate indicators. What does happen, however, is that in the face of practical obstacles of various kinds that hamper a direct appreciation of a social phenomenon, indicators can provide approximate but reliable information as long as they are carefully selected. The use of indirect indicators usually dramatically reduces the difficulty and cost of obtaining relevant information. Obviously, there can be almost as many indicators of a social phenomenon as there are analysts of it, and it is of course natural to expect that some will have a greater capacity for description whereas others will turn out to be more difficult to gather. Because of this, the final selection will always depend on the type of phenomenon that is studied, the characteristics of the social and economic environment where it appears, the cumulative experience of the analysts, and the circumstances of time and money under which the research is being conducted.

It has been said elsewhere, although it is advisable to repeat it here, that the contribution of the technical advisory team in charge of adapting the

methodological guidelines developed for countries with more advanced economies to individual circumstances consists of trying to provide, by means of indirect indicators, the sum of serial statistical information and partial studies that these guidelines take for granted. It is a given that the quality of the results may not be optimal, which does not mean it is worthless; the present document proposes drawing up guidelines so that the countries can test the premise that directly relevant results can be obtained in a short time and at a low cost, more than justifying all the work that has been done.

### **An initial task**

In order to obtain a first estimate of the characteristics of the problem of abuse in PAS consumption in the Caribbean and Latin American countries, the four pilot countries have been requested to proceed with trying to determine the indicators that appear listed below. These indicators were selected and systematized on the basis of various criteria: prior experience, accessibility of the information in most of the countries, tangible character (that is, it is known that this information exists in many parts), complexity (as higher levels are reached they are more difficult to obtain), and cumulative character (those at the lower level may be a condition to obtain those of a higher level). All the information that is requested corresponds to the last year for which information is available, but it is recommended that data from previous years, when they exist, be kept because this will facilitate comparisons as a mechanism for controlling the quality of the collected information while contributing to defining trends in the evolution.

The following indicators were developed by the research team to provide a basic set of guidelines that would comprise a complete cost study in each country.

These indicators were developed taking into account the wide range of research infrastructure not only among the pilot countries, but among other Member States that will carry out these studies in the future. The majority of the information, particularly the information associated with the level 1 indicators are easily accessible by most countries.

#### **Level 1: Direct Cost Indicators**

##### **Number of requests for treatment in public and private institutions**

This involves recording all the cases where there is a request for treatment. Generally, institutions hold records of this kind and the idea is to achieve a coverage that is as complete as possible in each country. It can be done by letter, phone, personal calls, or e-mail, but the latter two are probably the most effective.

##### **Number of deaths or severe injuries associated to consumption as a result of homicides, accidents, or suicides**

The principal source of information is the Coroner's Office of each country and sometimes the Police. Normally these data are publicly available and can be obtained by one single visit. It should not be forgotten that, in the case of deaths, there are three categories: accidents (of any kind, including an overdose), suicide, and homicide. In the case of injuries, all the cases that have been examined by forensic medicine or reported to the Police due to any kind of violence or accident should be included.

### **Number of convictions and length of sentence for drug trafficking**

Here the persons convicted for distribution, sale, processing, or production of substances are included. The persons who are on trial or have been arrested should not be included.

### **Number of prisoners for committing offenses and crimes associated to consumption (as a cause or a consequence)**

This number involves consumers and addicts who have committed crimes under the effect of substances or for the purpose of obtaining money to buy them.

### **Consumption studies among the population in general, students, or workers**

This refers exclusively to quantitative studies. In the countries where there are no such studies, the advisory team can help to find strategies that are low-cost and easy for data gathering.

Establishment of the validity of the data provided by the four pilot countries in the format drawn up by Jeffrey Merrill on direct government expenditures (see Annex A).

Those responsible for providing the information that is requested therein should attempt to clarify whether the data submitted are supported by suitable studies or if they involve estimates made by extrapolation or other means.

## **Level 2: Direct Cost Indicators**

### **Number of hospital admissions for consumption and length of stay**

It should indicate what type of classification is being used by the countries to record the cases (for example, the International Statistical Classification of Diseases, that is, ICD 9, ICD 10, or another) and if it is unified in the different institutions. This concretely means emergencies or intoxication produced by the consumption of substances and length of hospitalization. It is expected that some of the countries will have difficulty with this indicator.

### **Number of arrests for possession and consumption; time of duration and number of persons involved in the action**

This includes three aspects:

Number of persons arrested for possession and consumption the last year.

Average number of persons involved in an arrest (policemen).

Average duration of the arrest for these reasons.

This indicator may have different meanings in different countries: in some, possession of any amount of illegal substance is a crime, in others there is the “personal dose”; restrictions on consumption may also vary (for example, juveniles, public places).

### **Number of persons in treatment, type of treatment and duration of treatment.**



A template will be made to present these data since there could be wide variations between countries: In some cases the preferential form of treatment are therapeutic communities, with very long treatment periods, in other cases, walk-in clinics, and in others internment or hospitalization of at least a month. To begin with, the data may refer only to institutions, since individual private treatment data is difficult to access.

### **Destruction of physical assets**

This refers basically to property damage triggered by the consumption of substances. At present, only two sources shall be consulted: car accidents with insurance companies and the police, and fires with the fire station and the police. It should indicate whether laboratory tests were conducted or not.

### **Level 3: Indirect Cost Indicators**

These indicators will be drawn up in detail on the basis of the experience of the other two levels.

Follow-up of persons who have been in treatment (cost/effectiveness)

Methodology for calculating the loss of labor productivity

Economic costs of premature mortality

Economic costs of absenteeism

Social impact from the loss of goods (tangible and intangible)

Economic loss due to morbidity

Opportunity cost for consumption of PAS

It is expected that, for some countries, it will turn out to be less difficult than for others to obtain the information that is requested, and even when it is possible to obtain it in all the countries, it is likely that the data are available at different levels of breakdown. Despite this, however, and in terms of what is expressed in other parts of this document, the exercise is useful not only to define the minimum parameters for the development of a common methodology making it possible to obtain consistent estimates through the different geographical areas, but also to establish a preliminary inventory that reflects the status of the statistical information that is available. The group of indicators of the last of the related levels, which for each country will be the last stage before drafting the final report, involves combining the information gathered in the two preceding levels with additional data related to the characteristics of the population and their average levels of remuneration for work, to produce tentative estimates of the magnitude and characteristics of the economic impact of abusive consumption of PAS in each one of the countries.

From the above it can be concluded that the findings of the respective studies may be liable to comparison only if the different nations adopt a common model for cost estimates, on the basis of the use of a uniform set of indicators. By working in this fashion and relying on the resolute collaboration of all the pilot countries in the common effort to develop a methodology applicable to all, the studies will obtain the additional benefits of being able to guarantee, on the one hand, that the system can be transferred to any country of the region and, on the other hand, that the comparative analysis will help to detect without any major difficulty those indicators that, for any reason, ostensibly appear “outside norm.” The latter as a minimum element for quality control on the collected information, which is not negligible in

view of the difficulties in compiling the data and the slim or doubtful chances of checking them in the same environment where they were collected.

## **5. STAGES OF A COST-OF-ILLNESS STUDY**

The conceptual structure of a cost-of-illness study on psychoactive substances does not involve any major difficulty. Part of the definition of PAS abuse, as a situation where private use by individuals leads to social costs for the entire collectivity, follows a three-step process:

1. Identification of the adverse consequences of abuse.
2. Documentation and quantification of the degree of causality between abuse and adverse consequences.
3. Assigning costs to the adverse consequences.

However simple this process may appear to be, successfully getting around each one of these steps is a veritable challenge. That explains why there are so few studies in a field where it is indispensable, not to say imperative, to have relevant, reliable information.

The adverse consequences of PAS abuse are evident, first of all, in the health of those who abuse the psychoactive substances, as well as of the persons surrounding them, but their impacts extend to, and have ramifications for, the entire social fabric. It is possible that the long list of negative consequences are universally valid, which is an assumption that at least makes it possible to take advantage of the efforts of researchers who have conducted their studies in societies that are more aware of the importance of carefully gathering relevant

statistical information.<sup>2</sup> But it may also happen that the circumstances and conditions prevailing in the various cultures lead to different lists. It is therefore advisable to start by analyzing the lists of the studies undertaken (and the new research, as they become public) in order to take the most suitable decisions for each country.

It is not reasonable to expect that the degree of causality between PAS abuse and concomitant adverse consequences remain unchanged across cultures, since many factors that do not exist everywhere contribute to the form and magnitude of their impact, and when they do exist they do not necessarily exert it to the same extent. This holds true to such a degree that it is generally felt that it is not even true that any series of causal factors between abuse and consequences (or *etiologic fractions*, as they are also called) can be applicable to the same society over time or in its entire geography.

But the determination of these causal factors takes for granted conditions that do not exist in the majority, much less in all, of the Caribbean and Latin American countries mainly in terms of the careful and systematic gathering of statistics by our hospital institutions and health professionals in their private practice. The lack of information prevents epidemiological studies from being made, and the absence of these studies hampers even a rough estimation of the costs associated to the illness.

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<sup>2</sup> Among the national cost-of-illness studies recently conducted on the abuse of psychoactive substances in their different countries, those frequently cited are those of Canada (Adrian et al., 1989; Single et al., 1996), Switzerland (ISPA, 1990), the United Kingdom and the Netherlands (Fazey & Stevenson, 1990), United States (Rice et al., 1990; The Lewin Group, 1998), and Australia (Collins & Lapsley, 1991, 1996).

Tackling the difficulties arising from the absence of statistical information about the characteristics of morbidity and mortality in a social cluster is not an easy task. Nor are the results of any effort aimed at improving matters going to be apparent immediately. Nor is it possible to overcome overnight a mentality that can probably be explained, at least in part, by the chronic shortage of resources to address needs considered to be more pressing and that has made us view any effort to gather information as superfluous. Something will have to be done about the matter, but meanwhile there is no other course but to support the initial studies on the economic impact of PAS abuse in the Caribbean and Latin America in the causal factors determined for other countries that are very different in so many ways.

Under the circumstances that have been noted, the first effort to estimate the social cost of PAS abuse in our countries, which is why the present Manual is being drawn up, will have to focus exclusively on the assignment of costs to the adverse consequences of abuse.

## 6. COSTS OF A COST-OF-ILLNESS STUDY

Most of the cost-of-illness studies are based on the economic notion of opportunity cost. This concept, which is essential for economists, arises from how all human societies throughout history have addressed, either consciously or unconsciously, the problem of the constraint of common resources available to meet the needs of the collectivity. It means that any resource allocation for a given purpose must necessarily represent an equivalent sacrifice in social investment for another sector or other sectors. In other words, any use of resources has a sacrificed opportunity cost of use for other purposes. Thus, for example, building a dam would imply postponing the enlargement of an airport, or in other sector the need for further outlays to ensure law and order may affect the quality of education, health, and other basic services.

Another concept that helps analysts of cost-of-illness studies to orient their research is that of a "*counterfactual proposition*," which was mentioned earlier. This points to the entirely hypothetical and impossible situation that would prevail in real life if there were no illness. The comparison of the circumstances of the economy in one or the other case (the real or evident case, compared to the hypothetical or counterfactual case) permits a rough estimate of the economic impact of the illness.

For any domestic economy as a whole, public costs from PAS abuse have their origin in efforts to control supply and demand. On the supply side, it involves estimating the cost of preventing psychoactive substances from reaching the consumer. On the demand side, the efforts focus on quantifying the costs of medical and hospital treatment for the abusers to restore their physical and psychological conditions and, to the extent possible, limit a relapse of the abuse; costs associated to the prevention of consumption are also included here.

But the problem of estimating costs from PAS abuse in an economy does not stop there. As a consequence of abuse, what happens is that persons who reach this point of excess in consumption are not only undermining their own health but also, as a result of lower productivity (associated to lateness, absenteeism, lesser capacity to concentrate on work, and in extreme cases death), reducing the economy's general capacity to produce goods and services. It is well known that this production capacity, when defining a country's possibilities of adequately meeting the basic needs of the population, turns out in the final analysis to be a determining factor of the relative social welfare of the collectivity.

It can be inferred without difficulty from the above that, depending on the origin of the money covering the costs incurred, it is possible to differentiate between personal (private) costs and social (public) costs. In addition, to estimate the costs stemming from PAS abuse whether from the perspective of supply or from the perspective of demand, usually differences are made among various major cost categories. Therefore there are differences between private costs and social costs, direct costs and indirect costs, core costs (health) and non-core costs (non-health), and tangible costs and intangible costs. Some of these cost categories



coexist, and this makes them more difficult to interpret and, as a result, more complicated to estimate. Because of this, to avoid confusion, it is advisable to provide, once and for all, the meanings of the most usual groups.

## **6.1 CLASSIFICATION AND DEFINITIONS**

### **6.1.1 Personal Costs**

They come from a rational and wholly voluntary decision by the individual, who decides to accept them, aware of the impacts of his/her decisions and exercising his sovereign will to choose. Ordinarily, personal costs are borne in mind when estimating the economic costs of the abuse of psychoactive substances because, in the framework of price formation theory, it is assumed that the personal benefits or satisfaction stemming from consuming the good or from enjoying the service exactly offsets these costs.

### **6.1.2 Social Costs**

They involve public policy decisions about the best way to use the resources of the collectivity for the common good. Although occasionally they can be a consequence of the decisions of individuals (as in the case of health care for abusers and victims), they are never optional for governments and they always compete with the social group's other pressing needs for attention.

### **6.1.3 Direct Costs**

In the context of PAS abuse cost studies, it refers to the value of the goods and services that are effectively aimed at mitigating consequences, such as the costs of specialized care for addiction and health care for its sequela.

#### **6.1.4 Indirect Costs**

They consist of the value of personal productive services that are no longer provided as a result of PAS abuse.

#### **6.1.5 Core Costs**

Health care costs and the costs of other health-related consequences stemming from the abuse of psychoactive substances.

#### **6.1.6 Noncore Costs**

Costs that do not appear in the health impact but rather in other dimensions: family, education, labor, etc.

#### **6.1.7 Tangible Costs**

Tangible costs are those costs that, when reduced or eliminated, produce resources that then become available for other uses. All costs included in the PAS abuse cost studies belong to this category.

### **6.1.8 Intangible Costs**

In contrast to tangible costs, intangible costs do not produce resources that become available for other uses as a result of their reduction or elimination. Death, human suffering, and pain are typical examples of these costs. No one can deny that they do exist and that they are considerable, but it is virtually impossible to express them in monetary terms. Because of this, they are normally not included in PAS abuse cost studies.

### **6.1.9 Avoidable Costs**

Those costs associated to abuse that can decline or disappear as a result of government policy initiatives or changes in the behavior of persons.

### **6.1.10 Unavoidable Costs**

Present and future costs stemming from current and past abusive consumption that would not disappear even if PAS use were to be dropped.

## **6.2. MAIN TYPES OF SOCIAL COSTS STEMMING FROM PAS ABUSE**

Tables 1 and 2 provide the cost classifications proposed by the Canadian and U.S. methodological models for studying the illness of psychoactive substance abuse. Table 1 presents the proposal of the Canadian Centre on Substance Abuse (CCSA) (see Annex B), and Table 2 presents the model followed by the U.S.

National Institute on Drug Abuse (NIDA) (see Annex C). In both cases, the methodological guidelines try to systematize the experience of those who have conducted existing studies, but they are aimed at offering support rather than providing precise standards, whose rigorous application would, in any case, be very difficult in view of the differences between countries.

Regardless of their more or less precise terminology, it can be concluded from the models that costs stemming from the abuse of psychoactive substances are apparent in the following:

- Direct government costs aimed at reducing PAS supply and demand, which focus largely on outlays for law enforcement and functioning of the justice system.
- Direct public and private costs related to caring for the health of the abusive consumers and their victims.
- Direct public and private costs from the destruction of property.
- Indirect public and private costs from the loss of productivity as a result of PAS abuse: absenteeism (lateness, incapacity, institutionalization, death).

Beyond the notable differences in the resulting estimates, most PAS abuse cost studies agree on the order of importance of the largest types of costs, that is, first

productivity costs, then health care expenses, followed by those costs relating to law enforcement and the criminal justice system, and various other costs (research, prevention, damages). In the studies, the first type, that is, the social costs from loss of productivity, usually appears to be more substantial than the others. This seems obvious when one realizes that, for any given individual case (the sum of all individual cases determines the overall results for the social conglomerate), health and legal problems have an average duration over time that is less (and therefore accounting for a comparatively lower cost) than the number of quality life years affected or lost with the resulting decline or disappearance of the productivity that is expected because of the impact of abuse. This holds especially true for addiction to illicit drugs, which usually affects the youngest sector of the population more frequently, whose ruined lives entail a comparatively larger social cost.

A more detailed description of the cost elements that usually stand out in each one of these groups is provided below. In any case, it is worth while to recall here that what was said earlier about the costs from PAS abuse does not only arise from the consequences for the abusive user himself/herself, but that it also extends to broad groups of persons surrounding the abuser, mainly but not exclusively, his/her family, neighbors, and fellow workers. The observation that the negative consequences of abuse lead to social costs even when they affect persons who are not on the labor force should be underscored, because to the extent that these persons carry out activities, albeit free of charge, they exert a social impact. This is the case of homemakers or many handicapped, unemployed or retired relatives who contribute to the household's economy by performing chores that someone would have to do (even sometimes by paying for them) if they did not perform them.

## **Costs from the Loss of Productivity**

It has just been said that this type of cost accounts for the largest among those attributed to PAS abuse in the studies that have been conducted. The loss of productivity stems from a combination of premature mortality and morbidity (illness).

### **Premature Mortality**

Abusive PAS consumption may lead to the death of the user either directly or indirectly. Regarding cases of direct death, the International Statistical Classification of Diseases (ICD) identifies the causes of death associated to PAS abuse. It is more difficult to detect deaths that are an indirect consequence of abuse (for example, death due to cirrhosis of the liver, nutritional or metabolic disorders, catching viral infections such as hepatitis or HIV/AIDS, injuries from traffic accidents, other accidents or assaults on persons, mental disorders, etc.).

### **Morbidity (disease)**

This subtype of costs includes, first of all, losses stemming from lateness at work and absences from one's job because of outpatient consultations, treatment, and hospitalization. According to studies, in addition to absenteeism, the most important cause of low productivity stemming from PAS abuse is lower job performance, not only of the PAS-abusing worker but also of those around him/her, who become the victims of his/her abnormal conduct.

## **Health Care Expenses**

- **Treatment for substance abuse**

The International Classification of Diseases referred to earlier defines the diagnoses associated to the abuse of alcohol and/or drugs, among which states of dependence, abuse, psychosis, poisoning, and overdose.

- **Treatment for comorbidities and trauma**

In addition to the health problem from substance abuse in itself, the abuse has indirect adverse consequences for the person (for example, death from cirrhosis of the liver, nutritional or metabolic disorders, viral infections such as hepatitis or HIV/AIDS, injuries from traffic accidents, other accidents, or assaults on persons, mental disorders, etc.) that may require one or various medical or paramedical consultations, outpatient care, or hospitalization.

## **Law Enforcement and Justice System Expenditures**

- **Cost of the law enforcement and justice system**

Similar to what occurs with health care expenditures, some law enforcement and justice system services have been established exclusively to control PAS

trafficking, in which case they can be identified directly. In other cases, it is necessary to establish proportions for allocating expenditures that are only partially related to PAS abuse. This is not any easy task, not only because breaking down the action of authorities into their many components on the basis of their effects (surveillance, arrests, prosecution, incarceration and jail) is already very complicated, but also because it is not always clear what role is being played by substance use and abuse in the criminal conduct to make it easy to determine which cases have to be counted to determine the proportionality.

- **Loss of productivity of the victims**

Under this concept, an attempt is made to estimate the cost of the time that persons other than the abusive PAS user or the drug trafficking chain spend in, or because of, police procedures, legal proceedings of all kinds, ranging from preventive detention to unjustified incarceration, as well as the taking of depositions, the admittance of evidence and reports by experts, including participation as sworn jury members or the provision of other citizen services. All of these activities, which usually take persons away from their occupations and which on occasion have severe consequences, turn them into victims of a situation that they did nothing to create.

- **Costs of the prison system**

The first economic consequence of the arrest, incarceration, and jailing of lawbreakers related to the use and abuse of PAS is their temporary (sometimes for



long periods of time) removal from the productive system. Sometimes there is some minimum compensation because of the work done by prison inmates, but there is probably no way to generalize this circumstance.

But the prison system also involves costs inherent to their establishment and operation. Although at first sight it would not appear that obtaining relevant information for estimating total costs for this item might involve major difficulties, the attribution of proportions for crimes related to PAS use indeed does involve difficulties. Regarding this, what was said earlier about the law enforcement and justice system also holds true.

- **Crime careers**

Not all delinquents involved in PAS use and abuse end up in the hands of the justice system (in fact, there are countries where those who are subject to legal proceedings account for only a very small minority). It should also be kept in mind that these individuals also drop out of the national economy's production system to focus on illicit activities, which from the personal point of view may become hugely productive. Because of their informal nature, however, they do not contribute anything to the collectivity in terms of fiscal revenues or added value to the formal production of goods and services.

### **Various costs**

- **Expenditures for reducing abuse**

They are usually the outcome of government social policymaking decisions. They are aimed at educating the public and obtaining better knowledge about the social problem involved in abusive use of PAS, and usually they consists of use prevention campaigns, as well as the funding of research by public and private institutions. Expenditures of this type are not viewed as direct costs because, although they do have a connection with the abuse and do have an evident incidence on the levels of abuse over the long term, for governments they are discretionary because they always have the option of not following up on the actions that are recommended.

- **Property destruction**

Usually, material property (installations and their contents, motor vehicles, etc.) is affected as a result of PAS abuse because of accidents or crimes. The degree of damage ranges from a defect or depreciation to total loss. The most frequent accidents are motor vehicle collisions or traffic accidents in general, and fires. The most frequent crimes are robbery with or without assault.

- **Social security**

This refers to payments charged to the public treasury, such as disability pensions, as a result of PAS abuse and which are for the benefit not only of the abusive users but also those who take care of them, as well as economically dependent relatives.

The administrative costs of the social security system, proportional to what is specifically dedicated to the operation of the system of benefits for abusive consumers, are also included here.

## **7. TOWARD A PRELIMINARY ESTIMATION OF PAS ABUSE COSTS**

The overview of the costs included in an economic impact study of PAS abuse provided in the preceding sector, along with the list of indirect indicators (levels 1 and 2) forwarded under separate cover to the pilot countries and inserted as annexes in the corresponding section, makes it possible to draw up a preliminary plan for estimating this impact and, at the same time, to identify some of the principal sources of information.

It should be emphasized here that the task of conducting a PAS abuse cost study is complex, because it is not expected that the basic information will be easily found in any of the countries. Therefore it does not involve the simple application of some magic spells that would immediately lead to the findings that are being sought.

It should probably be recalled here briefly that the conceptual framework for the cost-of-illness studies is deceptively simple, as it prescribes a process that involves only three steps: a) establishing the adverse consequences of the illness; b) determining the causal factors; and c) quantifying the findings. In the reality of the

domestic economies, however, the fact is that each one of these steps is fraught with difficulties because of the absence of basic information. Because of this, for this first coordinated attempt among the pilot countries, aimed at eventually extending it to the other countries of the Caribbean and Latin America, the use of the studies conducted for other countries regarding adverse consequences and causal factors has been recommended. Steps a) and b) of the process are to be carried out, whereas implementation of step c) should be limited for now, so as to focus efforts on obtaining at least an approximation of the magnitude of the problem of PAS abuse as the point of departure for tentatively quantifying its economic impact in each one of the pilot countries. Even under these circumstances, the implementation of the study is not as simple or rapid as one might wish.

Indeed, the first objective consists of trying to determine the magnitude of PAS abuse for the most recent year for which statistics have been published or are available for consultation, probably the year 2000 or, if not available, the most immediate previous year.

It has already been mentioned that psychoactive substances (PAS) include alcohol and tobacco, among the licit substances, and the other substances generically referred to as drugs, among the illicit substances. The studies conducted to date have focused only on alcohol, only on tobacco, only on illicit drugs (as a group), or any combination of the above.

At this point it is necessary to establish a preliminary limit. One has to determine what is meant by PAS for the purposes of the study that is going to be conducted. One option would be to try to determine separately the magnitude of the abusive consumption of alcohol, tobacco, and illicit drugs (as a group), with the idea that, because of the way data are obtained, it might be necessary to formulate mechanisms to classify these data into three groups. Once this first obstacle has been cleared, it will be possible to have better elements of judgment to redefine the scope of the next stages.

In short, the first stage of the study should focus on determining as accurately as possible the characteristics of the abuse of alcohol, tobacco, and illicit drugs in each pilot country during 2000 (or the most immediate previous year possible).

If there is no precise census of addicts, which is surely the case in all of our countries, the study will have to resort to indirect indicators to obtain an approximate idea of the problem nationwide:

- Data are required on the number and characteristics (age, gender, level of schooling, occupation, etc.) of those who have requested specialized treatment because of addiction or hospitalization for health care as a result of addiction. The ministries or secretariats of health can probably provide relevant information.
  
- Law enforcement statistics from the police force and other institutions in charge of administering justice provide information about crimes related to PAS abuse.

- Medical Examiner's Offices have information about the causes of severe injuries and deaths in those circumstances where the law enforcement and criminal justice system is involved.
  
- One also has to bring together the most recent national, regional or municipal studies on PAS consumption referring to specific age groups or occupations.
  
- The fire stations, the municipal authorities, and private-sector institutions such as insurances companies or trade associations are a source of information about property damage.
  
- The format on direct government outlays and the documents on which this information is based provide data about the levels of state intervention in their efforts to tackle the problem.

In all cases, it should be kept in mind that the indicators that are proposed and the others that can be compiled usually provide a partial vision of the total picture or a complete overview of only one aspect of the total picture, very much like the pieces of a puzzle. In the absence of any more precise criteria, efforts will always have to be made to rebuild, through these partial elements, the total picture on the basis of the distribution of the national population. There is no single way to do this, but in any case care will have to be taken to ensure that the inevitable processes of inference and interpolation are logically substantiated, no matter how questionable a given procedure might appear to be, compared to other approaches or other

possibilities. What is probably crucial here is to keep an open mind to technically and/or logically substantiated controversies, as well as an ongoing willingness to share concerns, mechanisms, and findings.

For these same reasons, it is advisable to proceed in an orderly fashion, in a common effort so that each pilot country will keep pace with the others and will remain focused on the task proposed for each stage or level of the study. This is the only way to move ahead firmly, so that the trees will not prevent us from seeing the forest.

## ANNEX A

### BRIEF EXPLANATION ON THE USE OF THE FORM

**Jeffrey Merrill**

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The following table specifies some of the areas where direct outlays made by the government are aimed at reducing the production, distribution, smuggling, and use of drugs. This table provides a framework that includes expenditure areas and types of information that should be included. It is simply a guideline to help the countries ensure that they have included all the relevant information. It includes the principal areas (drug supply and demand), related activities, and the agencies that carry out the activities.

This table only includes **directly expenditures**. Indirect expenditures are not directly related to the reduction of drug supply or demand. Although there are many private-sector not-for-profit agencies that spend money on these activities, they should only be included if their services are paid for or bought by the government.

#### Definitions

1. Government Outlays only refer to direct payments by the government for their own activities and to pay for those services through an entity that works directly for the government. It should not include services that receive funds from charitable sources, payments by patients or health insurance, or private sources.



2. Direct Expenditures are defined as only those expenditures that, in each area, contribute to reducing drug supply or demand. They do not refer to all the economic ways in which expenditures could be related to drug use. Note 1 in the form provides examples of direct and indirect expenditures.
3. Indirect Expenditures (not included in the table) refer to expenditures such as those incurred for the treatment of an illness caused by drug use (for example, HIV/AIDS, caused by the use of intravenous drugs). Indirect expenditures do not include the costs related to social welfare payments or disability payments for persons who do not work because of their drug problems.

The table is comprised of two principal areas: Supply Reduction and Demand Reduction. It also includes the principal activities of governments and the direct outlays related to these areas. The demand category is subdivided into treatment and prevention activities. In each one of the categories, the form specifies series of activities that might be considered relevant. The activities are suggestions, that is, the countries do not necessarily have to include all the activities. Moreover, the countries can include additional government outlays they believe are important for their country. As a rule, it is always better to include all possible activities and then eliminate some of them during the process of revising them.

## Individual categories

1. Penitentiary system: There is a category under *supply reduction* referred to as “penitentiary system.” This category refers only to those expenditures related to the incarceration of persons for drug production and distribution. Under *treatment* there is another category referred to as “penitentiary system” which refers to the expenditures related to incarceration of drug users. If it is not possible to differentiate between these two categories, they should simply be included in one single category. During the revision process, we can examine the potential of estimating the proportions of the two categories. The Lead Research team is willing to help any country that might want to differentiate these two types of expenditures for the penitentiary system.

2. Crop Subsidies: They refer to money paid to farmers so that they will not grow coca or other illicit plants and paid to them to plant other crops or to subsidize their income because of the losses they incur for not growing coca.

3. Military Expenditures: This category could include a variety of different activities, although it might be difficult to differentiate them in detail. The outlays made for the armed forces to search and destroy crops could be included. In urban areas, armed forces may be involved in keeping the peace and ensuring the security of public places and leaders. As for the militia, as it may be difficult to divide expenditures, the approach should be aimed at ensuring that the share of the military budget dedicated to supply reduction activities be fully accounted for. The same is applicable for law enforcement budgets where it is difficult to differentiate between various activities (we say “budgets” because there may be more than one police force, for example, national police force and provincial police

force). Thus, the approach will also be aimed at ensuring that only that share of the police budgets dedicated to supply reduction is included. The same level of separation of activities should be observed for courts of justice.

4. Treatment Services: Only the services that are *contracted*, or *provided or purchased directly by the government* will be taken into account. Drug abuse treatment paid for by health insurance or any national or international charitable organization will not be included. It is always important to take into account that, to calculate expenditures (in both this and other categories), *who* is paying for the service rather than *who* is providing it should be identified.

5. Prevention Activities: It is easier to carry out these activities in schools. In some cases, governments also hire NGOs, religious organizations, and other agencies to provide prevention services. These activities may be didactic or may take place as after-school or weekend activities. Likewise, they should only be included if the government pays for these services directly.

It is important to try to identify and include all the agencies involved in each activity to ensure that all relevant sectors are included in the estimation of total expenditures. The goal is to produce one single figure for all expenditures. The greater the detail, the greater the capacity to produce a useful estimate and facilitate future comparisons. Nevertheless, we hope that we can at least separate supply from demand expenditures.

Note: The word “drug” may also refer to the money spent on alcohol prevention and treatment (especially in the area of prevention).

# ANNEX A

**TABLE FOR CALCULATING DIRECT GOVERNMENT COSTS**

(it should be for the most recent financial year for

which information is available)

**Supply Reduction**

**Demand Reduction**

<u>Activities</u> <sup>4</sup>	<u>Agencies</u> <sup>2</sup>	<u>Amount Spent</u> <sup>1,3</sup>	<u>Treatment</u>			<u>Prevention</u>		
			<u>Activities</u> <sup>4</sup>	<u>Agencies</u> <sup>2</sup>	<u>Amount Spent</u> <sup>1,3</sup>	<u>Activities</u> <sup>4</sup>	<u>Agencies</u> <sup>2</sup>	<u>Amount Spent</u> <sup>1,3</sup>
Military			Direct Government Expenditures for Treatment			School Program		
Customs			a. Clinics			Others		
Police			b. Treatment Centers			a. Community organizations		
			c. Hospitals			b. NGOs		
			Treatment Services Purchased by the Government			c. Media (for example, ads)		
Courts			a. Private-sector Services					
			b. NGOs					
Penitentiary System: for podcers, traffickers, sellers			Incarceration for Users:					
			a. Jails and Prisons					
Crop subsidies			b. Treatment Programs					

**Notas:**

1. It refers only to direct expenditures related to substance supply or demand reduction. For example, the entire military budget is not included such as drug interdiction, seizure or destruction.
2. More than one agency participating in this activity can be included. All the agencies should be included and specified separately.
3. In national currency.
4. Only include those expenditures made by the government to pay for the activity directly or so that the government can purchase this service from some other source.

## ANNEX B

	Costs to users	Costs to other individuals	Costs to federal and other government	Costs to the private sector
<b>TANGIBLE COSTS</b>				
Consequences to health and welfare system				
Treatment for substance abuse	User paid insurance; out-of-pocket costs	Excess insurance premiums	Hospital and other health costs	Payments to the health insurance system
Treatment for comorbidities and trauma	User paid insurance; out-of-pocket costs	Excess insurance premiums	Hospital and other health costs	Payments to the health insurance system
Prevention, research, health and welfare services			Research, training, prevention, social security	Corporate investigation, prevention, industrial safety
Productivity costs, i.e., consequences to the workplace				
Premature mortality			Forgone taxes	Production losses owing to premature mortality
Lost employment or productivity	Forgone income net of taxes	Victims' forgone income net of taxes	Forgone taxes	Labor compensations, reduction of productivity
Other consequences				
Property destruction	Unreimbursed property damage	Fire losses, accident property damage	Accident and fire prevention, fire fighting costs	Losses due to accident damages and fires
Legal consequences: criminal justice response	Penalties (e.g., fines)	Victim's time	Law enforcement, justice system, and penitentiary costs	Loss of time (reduction of productivity) of victims; crime careers
<b>INTANGIBLE COSTS (not included in estimates)</b>				
Emotional costs	Pain and suffering to user, quality life years lost	Suffering to dependents and crime victims, restrictions of public's legal rights to expedite enforcement		

## ANNEX C

STUDIES ON THE COSTS OF PSYCHOACTIVE SUBSTANCE (PAS) ABUSE  
**NIDA (USA) - Economic Costs of Drug and Alcohol Abuse in the United States, 1992**

VALUE OF GOODS AND SERVICES	VALUE OF LOST PRODUCTIVITY	COSTS THAT ARE GENERALLY NOT QUANTIFIABLE
<b>HEALTH CARE COSTS</b>		
<p>Specialized treatment for PAS abuse</p> <p>Support for treatment of PAS abuse, including training, research, and administration of insurance</p> <p>Consequences of PAS abuse on health, including hospital care, physicians' fees, house care and prescriptions or continued services for certain categories of illness such as HIV/AIDS, alcoholic fetus syndrome, exposure of child to drugs, hepatitis and tuberculosis</p>	<p>Income reduction or loss due to job disability or unemployment</p> <p>Income loss due to premature death or institutionalization</p>	<p>Pain and suffering</p> <p>Funeral preparations</p> <p>Psychosocial development incapacity between abusive consumers and their children</p> <p>Family health</p> <p>Effective costs other than deductibles and joint payments, such as transportation costs, child care, and other factors associated to the use of health care services</p>
<b>COSTS OTHER THAN HEALTH CARE</b>		
<p>Justice system expenditures, including protection, trial and conviction</p> <p>Expenditures by victims</p> <p>Property destruction connected to crimes</p> <p>Administration of income transfer programs</p> <p>Traffic accidents</p> <p>Fires</p>	<p>Income loss due to job disability or unemployment of victims</p> <p>Income loss due to incarceration of offenders</p> <p>Loss of licit income, including taxes, owing to "careers in crime"</p>	<p>Decline of product quality</p> <p>Secondary market impacts</p> <p>Consequences of productivity for the members of the family</p> <p>Consequences of productivity for fellow workers and companies, which are not reflected in the income of the abusive consumer</p>

## **ANNEX D**

### **Formats for consolidating information**

The indicators for PAS use and abuse related to the section corresponding to the body of the Manual should be reported so as to avoid confusion. It is highly recommended that, in each case, the additional information that later makes it possible to track the sources, at least in terms of the institutions that were at the origin of the indicator, at the moment or period referred to and at the date that the form was processed, be recorded. These data are especially useful in those cases where the indicators have to be validated or updated at any time in the future.

As a result, it is suggested that any report coming from a pilot country and referring to an indicator explicitly contain the following information:

- Indicator
- Information gathering method
- Country
- Period or date referred to
- Date of gathering or recording
- Institution
- Agency
- Responsible Person or Contact
- Phone number or e-mail address



## **ANNEX E**

### **Glossary of frequently used terms**

#### **Abuse**

There are many definitions of abuse. For the purposes of the Manual, it is deemed that there is abusive consumption of psychoactive substances when their use has consequences entailing social costs.

#### **Cost effectiveness**

Ratio indicating the proportion or difference between the cost of an action aimed at producing a positive social effect and the effectiveness of that action, usually measured in terms of the saving stemming from having opted for that action.

#### **Counterfactual**

See **Counterfactual proposition**

#### **Counterfactual Proposition**

In **Cost-of-Illness Studies**, the entirely hypothetical social situation in which illness does not occur. It is a theoretical tool aimed at measuring, by comparison, the economic consequences of an illness. It gets its name precisely from the circumstance that what it posits is contrary to the facts given by reality.

### **Cost-of-Illness Studies**

They correspond to a specific type of economic impact study. Therefore, they are aimed at increasing understanding about the nature and environment of a given illness, as well as their predictable consequences for society as a whole. In the specific case of studies on the economic impact of psychoactive substance abuse, it essentially involves estimating the social costs incurred by any collectivity at a given time in comparison with a hypothetical situation in which the abuse does not exist. This hypothetical situation is usually called “counterfactual” precisely because it is contrary to the facts of reality.

### **Causal Factors**

See **Etiologic Fractions**

### **Attributable Factors**

See **Etiologic Fractions**

### **Etiologic Fractions**

This term comes from the field of epidemiology. On the basis of the adverse consequences attributable to psychoactive substance abuse, the etiologic fractions represent the degree of causality that can be statistically derived from the observation of numerous cases.

**Incidence**

This term comes from the field of epidemiology. Incidence is interested in the number of new cases of a disease or disorder occurring in a given period (typically one year) for the purpose of determining a trend in the course of its evolution.

**Indicators**

In the terms of the present Manual and in the face of the absence or inaccessibility of statistical information that would provide a more accurate description of the characteristics of a social phenomenon, indicators are attempts at indirectly estimating the phenomenon by resorting to a measurement of its manifestations or consequences.

**Pilot Countries**

In the terms of the present Manual, it refers to the nations representing the Caribbean and Latin America that have accepted an invitation by OAS-CICAD to attempt to adapt, under the coordination of an advisory team, the methodological guidelines proposed by researchers from developed countries (Canada, United States, Australia) and to undertake economic cost studies of psychoactive substance abuse. In alphabetical order, these nations are Barbados, Costa Rica, Mexico, and Uruguay.

**Pilots**

See **Pilot Countries**

**Prevalence**

This term comes from the field of epidemiology. Prevalence is aimed at determining the total number of cases of an illness or disorder in the population at a given time (for example, how many marijuana addicts there are in a given year in a country, regardless of when they became addicts).

**Psychoactive Substances (PAS)**

Substances whose consumption produces effects on the central nervous system and which have the capacity to modify its functioning and alter the field of consciousness.

## **Glossary of frequently used terms**

### **Abuse**

There are many definitions of abuse. For the purposes of the Manual, it is deemed that there is abusive consumption of psychoactive substances when their use has consequences entailing social costs.

### **Cost effectiveness**

Ratio indicating the proportion or difference between the cost of an action aimed at producing a positive social effect and the effectiveness of that action, usually measured in terms of the saving stemming from having opted for that action.

### **Counterfactual**

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In **Cost-of-Illness Studies**, the entirely hypothetical social situation in which illness does not occur. It is a theoretical tool aimed at measuring, by comparison, the economic consequences of an illness. It gets its name precisely from the circumstance that what it posits is contrary to the facts given by reality.

### **Cost-of-Illness Studies**

They correspond to a specific type of economic impact study. Therefore, they are aimed at increasing understanding about the nature and environment of a given illness, as well as their predictable consequences for society as a whole. In the specific case of studies on the economic impact of psychoactive substance abuse, it essentially involves estimating the social costs incurred by any collectivity at a given time in comparison with a hypothetical situation in which the abuse does not exist. This hypothetical situation is usually called “counterfactual” precisely because it is contrary to the facts of reality.

### **Causal Factors**

See **Etiologic Fractions**

### **Attributable Factors**

See **Etiologic Fractions**

### **Etiologic Fractions**

This term comes from the field of epidemiology. On the basis of the adverse consequences attributable to psychoactive substance abuse, the etiologic fractions represent the degree of causality that can be statistically derived from the observation of numerous cases.

### **Incidence**

This term comes from the field of epidemiology. Incidence is interested in the number of new cases of a disease or disorder occurring in a given period (typically one year) for the purpose of determining a trend in the course of its evolution.

### **Indicators**

In the terms of the present Manual and in the face of the absence or inaccessibility of statistical information that would provide a more accurate description of the characteristics of a social phenomenon, indicators are attempts at indirectly estimating the phenomenon by resorting to a measurement of its manifestations or consequences.

### **Pilot Countries**

In the terms of the present Manual, it refers to the nations representing the Caribbean and Latin America that have accepted an invitation by OAS-CICAD to attempt to adapt, under the coordination of an advisory team, the methodological guidelines proposed by researchers from developed countries (Canada, United States, Australia) and to undertake economic cost studies of psychoactive substance abuse. In alphabetical order, these nations are Barbados, Costa Rica, Mexico, and Uruguay.

### **Pilots**

See **Pilot Countries**

### **Prevalence**

This term comes from the field of epidemiology. Prevalence is aimed at determining the total number of cases of an illness or disorder in the population at a given time (for example, how many marijuana addicts there are in a given year in a country, regardless of when they became addicts).

### **Psychoactive Substances (PAS)**

Substances whose consumption produces effects on the central nervous system and which have the capacity to modify its functioning and alter the field of consciousness.