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**INTER-AMERICAN DRUG ABUSE
CONTROL COMMISSION**

CICAD

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**AN INFORMATION FRAMEWORK FOR THE DESIGN OF NATIONAL DEMAND REDUCTION POLICIES AND
PROGRAMS**



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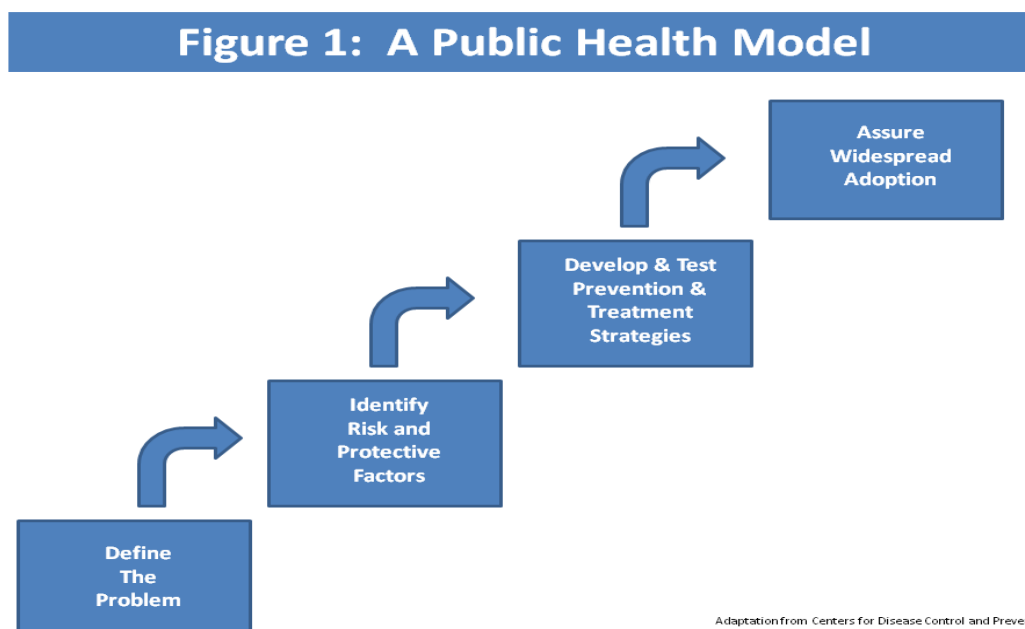
**AN INFORMATION FRAMEWORK FOR THE DESIGN OF NATIONAL DEMAND REDUCTION POLICIES AND
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An Information Framework for the Design of National Demand Reduction Policies and Programs

Introduction

The Thirteenth Meeting of the Group of Experts on Demand Reduction (the Demand Reduction Expert Group) was held in Washington, DC September 27 - 29, 2011, under the chairmanship of the United States, represented by Mr. David Mineta, Deputy Director for Demand Reduction at the Office of National Drug Control Policy (ONDCP). The Vice Chair of the Group was Brazil, in the person of Dr. Paulina do Carmo Arruda Vieira Duarte, Director of the National Secretariat for Drug Policies (SENAD). The meeting was attended by experts from the following countries: Argentina, Bolivia, Brazil, Canada, Chile, Colombia, Costa Rica, Ecuador, Guatemala, Haiti, Jamaica, Mexico, Panamá, St. Kitts and Nevis, Suriname, Trinidad and Tobago, Uruguay, and the United States.

One of the agenda items at the Expert Group meeting was a presentation by the U.S. National Institute on Drug Abuse (NIDA) that emphasized the fact that addiction is developmental—an individual's early childhood environment plays a critical role in brain development that can ultimately lead to negative behaviors such as drug use. Screening and brief intervention can lead to the early identification of problems and can direct those most vulnerable into treatment. It was highlighted that the design of demand reduction policies and programs must be done within the context of a public health model (see Figure 1 for an example of a public health model). NIDA's research shows that addiction is a disease of the brain and that ample scientific evidence exists to demonstrate that addiction functions as a chronic and relapsing disorder affecting individuals.



Within the context of a public health model, our understanding of the science of addiction and the affects of drug abuse on the brain means that prevention and treatment—the two traditional areas that generally constitute demand reduction—must address the person rather than a particular drug. To be effective, drug policy must address behavioral matters rather than just assume that the problem is only the use of a particular drug or drugs. It also means that drug policy must accept the reality that the chronic nature of the disease of drug addiction means that the acute care approach to treatment must be replaced with one that accepts the fact that recovery most often requires multiple episodes of treatment that includes recovery support services to prevent relapse.

Following this presentation, the Demand Reduction Expert Group discussed the importance of scientific evidence in developing demand reduction policies and programs. As a result of the discussion, CICAD received a mandate to develop a series of publications that focused on a range of effective demand reduction approaches. One of these mandated publications was to develop an information framework for the design of public strategies, policies, and programs in demand reduction.

The purpose of this report is to fulfill the latter mandate to develop the information framework for a science-based demand reduction strategy, policy, or program. This document presents the essential elements needed to guide national strategies, policies, and programs. Eventually the guide is expected to serve as a training tool to provide the scientific underpinnings for national demand reduction strategies, policies, and programs. This guide places particular emphasis on the types and sources of data required for such strategies, policies, and programs and provides a logical context informed by science that integrates data to inform decision-making. A possible future iteration of the guide will include training material that establishes priorities around the types of information that should be collected by member states as well as examples of the use of data to inform decision-makers and policy officials of the value of a data-driven demand reduction policy, program, or practice.

The Working Group

In response to the mandate for the an information framework for demand reduction, CICAD convened a Working Group comprised of experts in using data to inform demand reduction strategies, policies, and programs. This Working Group met at CICAD in Washington, DC on Ten experts from across the Hemisphere participated in the meeting along with CICAD staff from Demand Reduction and the Inter American Observatory on Drugs. John T. Carnevale, Ph.D., who is assisting CICAD with the drafting of this document, facilitated the meeting. A list of the meeting participants in presented in Appendix A.

Some members of the Working Group subsequently met with the CICAD Demand Reduction Expert Group during its fourteenth meeting in October 2012 to present the initial work of the Working Group and discuss its preliminary findings as well as solicit guidance as to content and design of the document. Following the October 2012 meeting, CICAD convened a smaller task force meeting

in December 2012 to address the comments and suggestions that emerged for the October CICAD Demand Reduction Expert Group meeting. This is the final document that summarizes the observations and discussions resulting from this extensive process.

The Working Group Deliberations

CICAD Executive Secretariat staff convened the July 2012 meeting of the Working Group by providing background information about the Demand Reduction Expert Group mandate and defined the tasks to be initially addressed by the Working Group over the course of the two-day meeting. The overall charge was for this Group to develop essential or core indicators that member states could use to shape a demand reduction strategy, policy, or program. Participants agreed that there was no need to reinvent the wheel, as prevention and treatment science had contributed much to the understanding of the relevance of many indicators over the past three decades. With this common understanding, the Group began by reviewing key documents to guide the discussion over the two days:

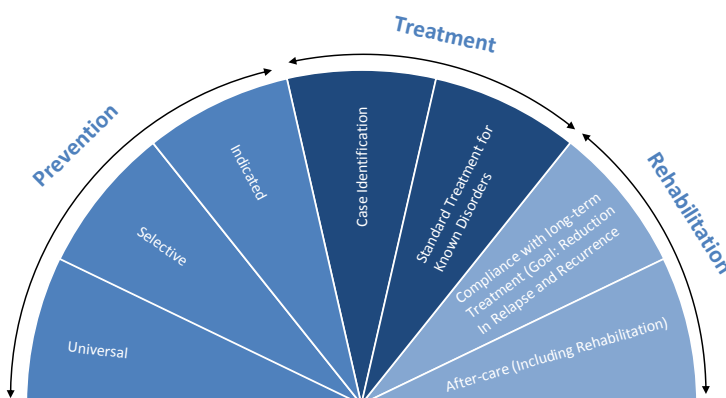
- The “Hemispheric Drug Strategy” approved May 3, 2009 by the CICAD Commission. The Hemispheric Drug Strategy includes 13 guidelines that member states agreed to pursue when developing a demand reduction strategy. These guidelines are presented in Appendix B
- The “Definition of Basic Indicators on Demand Reduction” approved by the CICAD National Observatories. It included five indicators for demand reduction: drug use or prevalence; problem consumption; perception of risk and availability; mortality rates; and patients in treatment. The experts in the Working Group agreed that these indicators are fundamental to the Information Framework for Demand Reduction.

The Working Group also recognized that certain indicators used in past versions of the Multilateral Evaluation Mechanism should be considered. They also agreed that indicators such as epidemiology of drug use and measures of consequences were essential and necessary to describe the required resource capacity to deliver programs effectively and efficiently.¹ To complement the epidemiologic picture, the working group unanimously recommended that data representing an assessment of available and needed resources be conducted. In other words, having good science-based data describing the drug situation is not enough; information about the ability or readiness of a member state’s infrastructure to deliver programs, identify resources, monitor and evaluate the drug situation, and provide central management of the problem is also essential.

¹ Drug abuse epidemiology focuses on the understanding of the nature, extent, consequences, and etiology of drug abuse often across individuals, families, communities, and population groups.

There was also a consensus among Working Group participants that the information framework should recognize that demand reduction should be viewed as a continuum. With regard to core indicators, it is sometimes difficult to determine when prevention ends and treatment begins. Addressing prevention, treatment, consequences, system infrastructure or capacity indicators and other outcomes measures associated with an individual's reintegration into society as being mutually exclusive, was counterproductive. Figure 2 depicts a demand reduction continuum that underlines all CICAD Demand Reduction initiatives and contributed to a common understanding of the Working Group's assignment and therefore, this document.

Figure 2
The Demand Reduction Services Continuum



The mental health intervention spectrum for mental disorders.
(Mrazek & Haggerty, 1994)

The Working Group's deliberations led to a number of topics related to the types of indicators for the use or consumption of alcohol, tobacco and other drugs and the damaging health and social consequences associated with such consumption. The Working Group analyzed types of indicators that would identify the impact of demand reduction on a person's reintegration into society resulting from successful drug prevention and treatment programs. Several questions were raised by the participants that generated debate and an informative discussion. Among these are the following:

- Who is the target audience for demand reduction?
- Should we rethink the meaning of prevention? Should we define prevention to reflect what science is now telling us, that prevention is more of a socialization process?

- Is the aim of demand reduction about improving social well being? If so, does the traditional supply reduction and demand reduction model have applicability?
- Should demand reduction policies and programs focus on the substances of abuse or should it be person-based, focusing on those vulnerable to substance use and those who already initiated use and may be suffering consequences of such use?
- What is meant by social integration within the demand reduction context and what indicators might be included to reflect social integration?
- Where does prevention end and treatment begin? Should demand reduction strategies, policies, and programs be viewed as a continuum?
- What is the role of the information framework with regard to shaping a member state's situation assessment and strategy, policy, and program monitoring and outcome evaluation?
- What indicators are most essential with regard to defining the demand reduction infrastructure, particularly with regard to the capacity to deliver or implement science-based policies and programs with fidelity and sustain them over time; can these indicators be prioritized?
- How do we present data in such a way that they are easily understandable with regard to shaping demand reduction strategies, policies, and programs?
- What role should qualitative information play in informing strategies, policies, and programs?
- Should the framework distinguish national from local strategies, policies, and programs, or should the information framework include indicators that are essential to demand reduction strategies, policies, and programs at all levels of government within a member state?
- How do we integrate the information framework into the decision making processes that are already in place for policy makers and program managers?
- What is the best mechanism to disseminate the demand reduction information framework? Should logic models be used? Should the CICAD document be a guide for training and technical assistance? Should this document serve as a guide that leads to subsequent, more in-depth work?
- How do we use the guide to inform the different levels of policy and decision making?

The Working Group reached a consensus on the categories of indicators that must be considered essential or core indicators for the demand reduction information framework. It agreed that the framework be person-centered and that five categories of indicators be included in the demand reduction information framework that covers:

1. The epidemiology of drugs
2. The consequences of drug use and problem drug use
3. The infrastructure or capacity of a member state to deliver policies and programs
4. The social context of drugs

5. Social integration.

These five categories will be discussed in more detail below.

The specific indicators identified for each of the five categories are presented in the appendix C. The Working Group also agreed that the core indicators should have applicability in formulating strategies, policies, and programs for demand reduction at the national and local or community level. The indicators presented in this report reflect that consensus.

One highly significant development over the course of the process was the formulation by the Working Group of a logic or conceptual model to show the target audience how indicators fit into the formulation, monitoring, and evaluation of demand reduction strategies, policies, and programs. This logic model framework is the basis of the approach the Working Group decided would best address many of the components of a demand reduction approach and should guide the issues and questions that would be raised throughout the meeting and in subsequent discussions with the Demand Reduction Expert Group. As designed, the logic model developed as the foundation of the information framework would become a planning tool that links information, science, strategies, policies, and programs, to ultimate outcomes. Ultimate outcomes, of course, are the end states desired by a country or community resulting from the actions of evidence-based programs that the demand reduction strategy, policy, and program seek to achieve. They are normative expectations that define what ought to be the most desirable state of affairs resulting from the action of strategies, policies, and program working in unison to mitigate drug use and its damaging consequences.

Four key decisions were made by the Working Group that guided their deliberations:

1. It was important to identify a set of specific indicators—core or essential indicators—for each of the five categories listed above. It was understood that the list of indicators could be expanded substantially, but the Working Group decided to focus its attention on the core set of demand reduction indicators most needed to help the target audience of the information framework determine optimal demand reduction strategies, policies, and programs.
2. One important conclusion that quickly emerged from the Working Group deliberations is that demand reduction strategies, policies, and programs should focus on the individual and the social context and not a specific drug consumed. Demand reduction should be person-focused, with social integration into the community being the ultimate end state or impact sought for all demand reduction strategies, policies, and programs.
3. It was decided that the Information Framework should be directed to a target audience who are most involved in shaping demand reduction strategies, policies, and programs. The Working Group determined that the target audience must at a minimum include two

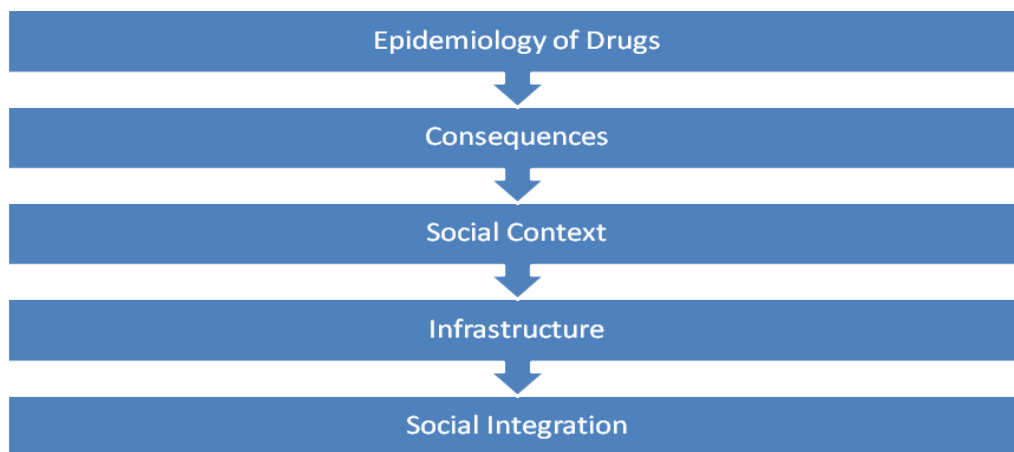
professional groups: a) high-level policy officials, planners or individuals who do day-to-day policy and program work, and, b) experts in demand reduction. Together, this audience is the core group most responsible for shaping a member state's demand reduction strategies, policies, and programs.

4. The Working Group discussed the reality that the demand reduction framework and guide would represent the ideal system and reference for a member state to use in order to inform its demand reduction strategies, policies, and programs. It was understood that at any given time not all member states might possess similar resources or capacity required to support the information, or surveillance systems for each of the recommended indicators. It was the hope of the Working Group that once a consensus was reached among the member states about the information framework, that it would serve as a guide for each member state to close information gaps.

Five Categories of Indicators

Figure 3 depicts the five categories of indicators that the expert Working Group identified as being fundamental to the demand reduction information framework. The categories reflect individual behavior in a logical ordering around drug use, the broad damaging consequences associated with that behavior, the ability of the member state to assess and respond to the drug problem, and the societal elements of the drug problem, and outcomes related to the social integration of the individual when demand reduction strategies, policies, and programs are successful.

Figure 3
Categories of Indicators for the Demand Reduction Framework



The categories of indicators of the demand reduction information framework are those viewed as foundational to estimating the nature and extent of a member state's drug problem to enable it to

assess needs, identify the most pressing priorities for evidence-based programs to address and to monitor and evaluate the progress and outcomes of strategies, policies, and programs over the course of the period of a drug strategy's implementation cycle. For purposes of clarity, the five categories of indicators are defined as follows:

- **Drug Epidemiology:** This category of indicator includes information about emerging and existing drug use behaviors. It reflects information on the incidence and prevalence of drug use and drug use disorders and provide socio-demographic information regarding (1) the characteristics of those who initiate use and those who are already drug users or experiencing drug use disorders (e.g., DSM-VIR or V, CIE-10) and (2) patterns of drug use (e.g., frequency, dosage, mode of administration). While it can also include information on the consequences or problems associated with that use, the Working Group decided to treat this area as a separate category within the information framework.
- **Consequences:** This category of indicators has two components: the morbidity and mortality associated with substance abuse mostly in the form of health and social outcomes such as overdose or adverse reactions, sexually transmitted disease, HIV/AIDs, loss of employment, family disorganization, foster care, and criminal behavior related to the acquisition, sale, and use of licit and illicit drugs. Consequences related to the costs associated with these health and social outcomes as well as productivity lost from drug use, but lost productivity may be also included as part of an estimate of societal costs of drug abuse in the Social Context of substance abuse discussed next.
- **Social Context:** This category of indicators refers to socio-environmental factors or social phenomena that influence behaviors such as economic stratification, networks, workplace demands, and other social experiences such as productivity lost to drug use that could also be addressed in demand reduction strategies, policies, and programs.
- **Infrastructure:** This category of indicators refers to a member state's organizational and manpower capacity or ability to deliver or implement demand reduction strategies, policies, and programs. Most indicators are systems-oriented. For example, they may include having an information framework to conduct needs assessments and to assess, monitor, and evaluate the drug program. They may also include the bureaucratic capacity to organize strategies, policies, and programs, including identifying and allocating resources to priority areas and the manpower with appropriate training needed to deliver, monitor and evaluate treatment and prevention programming. They may also include the capacity of prevention and treatment systems to deliver science-based strategies, programs, policies, and practices along with credentialing/licensing training to upgrade the quality of delivered services.

- **Social Integration:** This category of indicators refers to pro-social outcomes that demonstrate the successful integration or re-integration of vulnerable and at-risk individuals into their communities. A successful demand reduction policy or program will enable individuals to enjoy healthy lifestyles in the community defined in terms of their living condition, re-engagement with their family, friends, and workplace, and being pro-social and crime-free. Overall such integration will eventually reduce the initiation of substance use and progression to substance use disorders and addiction.

The Underlying Logic Model of the Information Framework

The purpose of identifying the essential or core elements of the information framework is to help the target audience (high-level policy makers, policy and program planners, and experts) understand the role of information systems when designing and implementing drug control strategies, policies, and programs. The list of indicators is neither intentional nor exhaustive, as the mandate was to provide a guide about core indicators that enable the formulation of strategies, policies, and programs that share a common understanding of the drug situation and options to monitor and evaluate the implementation of these strategies, policies, and programs and the outcomes resulting from their actions.

Demand reduction was understood as comprising efforts engaged at drug use prevention and treatment within the context of a public health model.² While efforts by drug traffickers to satisfy market demand carries with it threats to democracy and economic stability, the Hemispheric Drug Strategy adopted by the General assembly of the Organization of American States in June 2010 made it clear that the first step for any country in the hemisphere to address its drug problem was to target the underlying causes of the drug problem. This recognition of the importance of targeting demand reduction is what drove the thirteenth meeting of the Expert Group on Demand Reduction in 2011 to develop this information framework.

To ensure that science informs practice, the design of the information framework was intentionally cast in terms of a logic model so that relationships among the plethora of indicators could be best understood within the prevention and treatment context. With the understanding that the consumption of drugs and therefore Demand Reduction interventions can be represented along a continuum (see Figure 2), the information framework was formulated around a logic model that demonstrates how data and other information links to evidence-based demand reduction practices.

The use of logic models is not new to drug policy and demand reduction program selection. CICAD's 2009 guide, "How to Develop a National Policy: A Guide for Policymakers, Practitioners, and Stakeholders" (the CICAD Guide) describes how logic models are important tools for

² In simple terms, a public health approach to demand reduction involve evidence-based prevention, screening and brief intervention, drug treatment, and recovery and support services in health care settings. Addiction is understood to be a disease best addressed through the health care system.

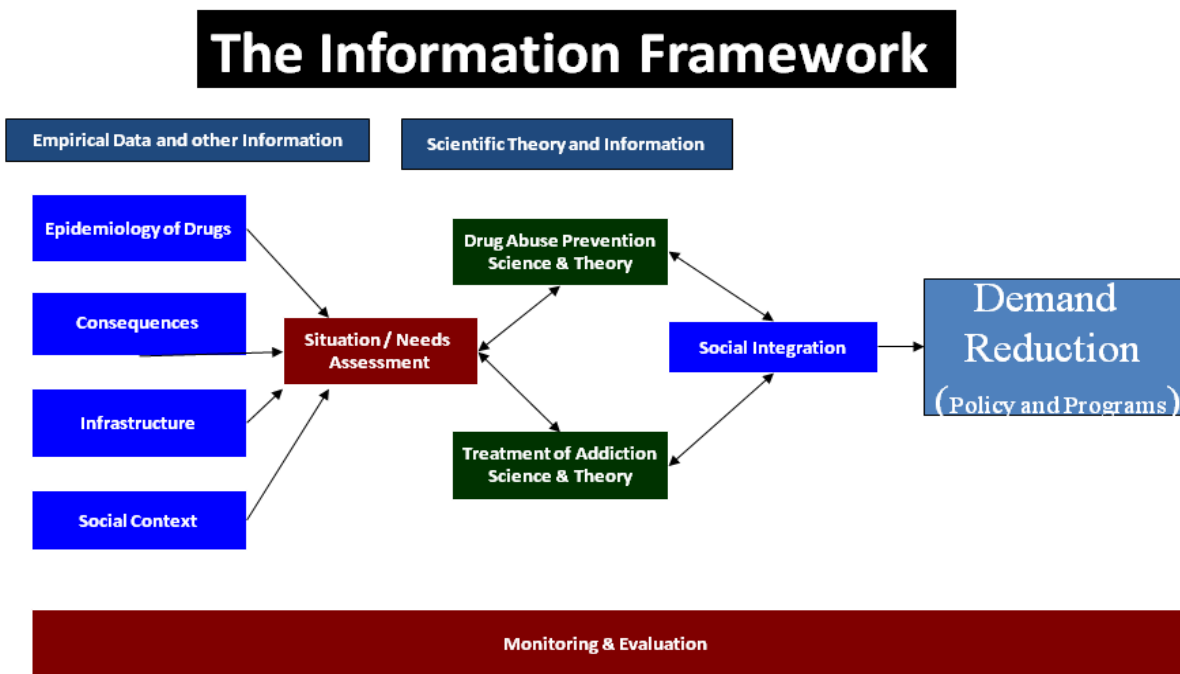
representing relationships graphically among key elements of a systems' approach to drug policy and program selection. They can be used to demonstrate the "theory of change" that is key to promoting understanding of the contribution of even the tiniest policy and program elements that comprise demand reduction. With regard to the demand reduction information framework, the Working Group recognized that the categories of indicators could be cast using a logic model to present such theory and through the use of the five categories of indicators toward addressing the drug problem and achieving demand reduction outcomes.

Figure 4 presents a logic model developed by the Working Group that integrates the five categories of demand reduction indicators into a theory of change model that links information and prevention and treatment science to demand reduction policy and practice. The logic is designed to flow from left to right corresponding to information (far left hand side) being combined with what prevention and treatment science tells us comprises evidence-based approaches to policy and program selection to produce long-term outcomes for demand reduction. The model is color coded to simplify presentation.

This model presents preventive interventions as a continuum that views it targeting the general population through complex strategies developed by highly specialized teams. The continuum concept sees a broad spectrum of options available in the form of a network that includes intersectoral coordination to address needs of different individuals and populations in order to provide the best results. This view aims to match availability of services to demand taking into account the needs and characteristics of the population in order to achieve the greatest coverage possible.

- There are five blue boxes that correspond to the five categories of indicators of the information framework. Four categories are considered foundational in that they support activities such as needs or situation assessments, program selection, and monitoring and evaluation. These categories are: Epidemiology of Drugs, Consequences, Infrastructure, and Social Context. The fifth category of indicators (Social Integration) captures the ultimate activities and desired outcomes or impact from science-based prevention and treatment interventions and is displayed (again as a blue box) on the right-hand side of the figure.

Figure 4
Categories of Indicators for the Information Framework



- As it was previously noted, the five categories of indicators support two very specific tasks that CICAD identified in its guide (cited above) for developing evidence-based national drug policies to ensure that results are achieved according to expectations. In designing drug strategies, the CICAD Guide asserts that every policy should begin with a needs or situation assessment to gain understanding of the drug problem. This assessment is highlighted as one of the red boxes adjacent to the four categories of foundational indicators used for such assessments.
- The two green boxes in the middle of the logic model are intended to be reminders to the target audience that information is science-based and that prevention and treatment science has much to contribute to the selection of evidence-based programs that achieve lasting, long-term outcomes resulting in social integration.

The logic model framework depicted in Figure 4 shows that demand reduction experts have recognized the importance of the science of prevention and treatment (demand reduction

science) being brought to bear on a single category of outcomes: social integration. In other words, a successful demand reduction strategy, policy, or program is one that enables the successful inclusion of individuals in the community. This distinction is viewed as a critical one in that it links with demand reduction science and conforms directly to the guidelines in the 2010 Hemispheric Action Plan that emphasized “social reintegration” as a practical expectation of successful demand reduction policies and programs.

The logic model framework also emphasizes the role of monitoring and evaluation as a continuous process that underlies the framework. This is consistent with the CICAD Guide, which asserts that strategies, policies, and programs be monitored and evaluated to determine compliance with expectations about performance results. The CICAD Guide defines monitoring as the “continuous scrutiny or routine data collection on various factors (e.g. behaviors, attitudes, deaths) over a regular interval of time.”³ Evaluation, on the other hand, is defined as the “systematic and objective assessment of an on-going or completed project, program, or policy, including its design, implementation, and results.”⁴ All five categories of demand reduction indicators are used in this regard, which is represented by the red box at the bottom of the diagram being extended across the entire logic model. As depicted, four categories of indicators (epidemiology of drugs, consequences, infrastructure, and social context) support situation or needs assessments which in turn informs strategies, policies, and program selection. The social integration category is depicted as supporting results or impacts expected to be addressed by the strategies, policies, and programs. All five categories of data can be monitored for various purposes as well as use its evaluations or research.

Specific Indicators by Category

The challenge for the expert Working Group was to delineate the essential indicators for the information framework for demand reduction. The five categories of indicators that are being considered were selected based on expert opinion informed by the strength of the evidence that science has to offer and practical experience in advising high-level government officials, planners, and other stakeholders who design and implement demand reduction strategies, policies, and programs, and understand the importance of information and science in effective, outcome-oriented demand reduction policies and programs.

The Working Group met with the understanding that member states and other countries have numerous sources of indicators that can be used to support needs assessments, policy and program monitoring, and outcome evaluation, but that its task was limited to identifying practical information for stakeholders who range from high-level government officials to experts in demand

³ CICAD, “How to Develop a National Drug Policy: A Guide for Policymakers, Practitioners, and Stakeholders,” 2009, page 25.

⁴ Ibid, page 25.

reduction policies and programs. The World Health Organization (WHO), for example, identified 135 indicators, 36 of which are core indicators, in a 2009 report related to drug consumption, drug use consequences, treatment, and policy that could be useful for the purpose of this document. The WHO work in this area represents a significant contribution to expert understanding of the plethora of data sources potentially useful on some level to describe drug use and its consequences. The challenge for this CICAD document, however, is to limit the discussion to identifying those core indicators deemed most important in designing and implementing evidence-based demand reduction policies and programs for a broader stakeholder audience.

With regard to specific indicators, the science of prevention and treatment has generated substantial knowledge about sets of indicators, along with guidance about how to use them effectively to design, implement, monitor, and evaluate demand reduction strategies, policies, and programs. The following discussion highlights the knowledge gained from science for each of the categories of indicators identified by the expert Working Group.

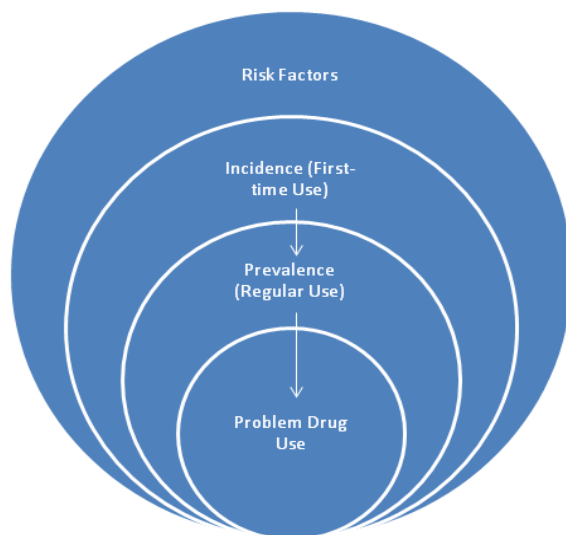
Appendix C delineates more information about the specific indicators identified below. Upon the presentation and approval of this information framework by the Commission, ES/CICAD proposes to expand its scope to include sources and methods for obtaining and using these core indicators in applied situations as part of its ongoing training and technical assistance to the member states. This expansion will include knowledge dissemination on the importance of each indicator with regard to its role in informing and shaping the design of demand reduction strategies, policies, and programs.

Appendix D discusses the fact that most indicators may be delineated by type of drug, age, sex, special populations, and geographically.

Epidemiology of Drug Use: This category of indicators includes those that capture information about potentially new or emerging trends as well as existing trends. Figure 5 shows a way to classify specific indicators falling under this category. It begins with the understanding that there are populations at risk for drug use. Prevention science has shown that the existence of risk factors does not necessarily mean that drug use will start, but their presence in the population means that prevention programs can mitigate their potential impact. There are a number of risk factors: youth perceptions that parents approve of their drug use; youth beliefs regarding the normative nature of drug use among peers, peers engaging in problem behavior; low perception about the danger or harms of drug use; weak parent and youth relationships and family cohesion.

In general, the data that informs the epidemiology of drug use is based on population-based surveys and the use of representative samples. Key to these estimates is being able to define (1) the population from which the estimates are made and (2) the time when the survey is conducted. Having a well-defined sampling plan and time of survey administration provides the basis for developing trends over a period of years to determine changing drug use patterns and, thus the impact of population-wide demand reduction strategies, policies, or programs. Generally, these surveys target households or students attending school.

Figure 5
Essential Indicators: Epidemiology of Drug Use



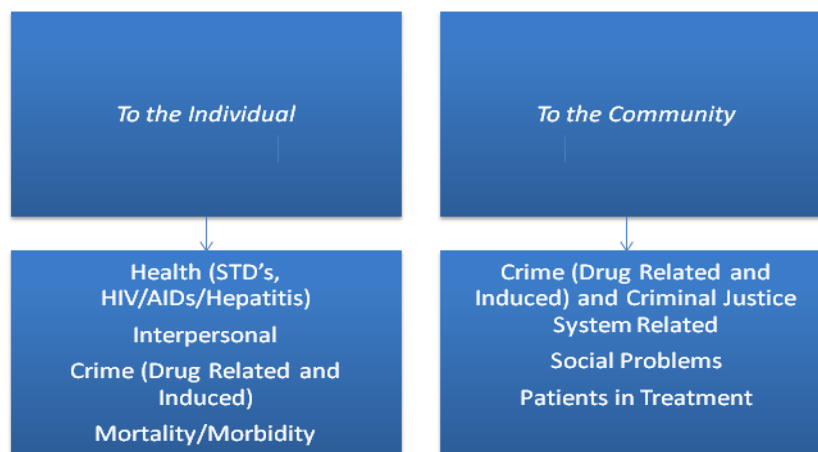
If drug use does start, it usually does so in mid-to-late adolescence. Drug use incidence, or first-time use or drug use initiation, is a measure that captures this information. It is most often measured by the average age of onset by drug use category. Prevention science has demonstrated that the earlier the age of onset, the more likely it will be that an individual will develop drug-related problems later in life.

It is important for clarity purpose to note that the circles in Figure 5 are intended to convey a relational progression from one state of drug use to another (beginning with individuals being at risk for drug use with the understanding that some of these individuals may progress to first time use as defined by incidence, to regular use, and possibly to problem drug use such as addiction). The size of each circle is not intended to suggest the magnitude of drug use at any given state of drug use.

After initiating drug use, some individuals will continue to use and go on to become regular drug users. Regular or current use is most often measured by past month prevalence of drug use, but it may also be measured as use in the past year or in an individual's lifetime. As Figure 5 also shows, some of the individuals who engage in drug use will become problem drug users. This is often measured using population estimates counting the number or percentage of drug users who are dependent or abusers. Not shown here are data on regular and problem drug users who stop using drugs. These indicators are presented in the discussion of indicators under the category of social integration.

Consequences of Drug Use: This category of indicators generally includes measures of health- and crime-related effects caused by or associated with drug use. As Figure 6 shows,

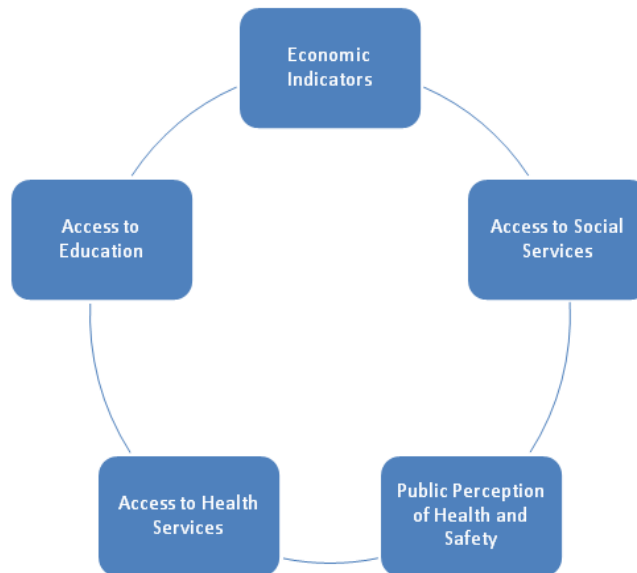
Figure 6
Essential Indicators: Consequences of Drug Use



consequences can accrue directly to the individual and to the broader community. With regard to the individual, drug use is a major reason for the transmission of HIV, sexually transmitted diseases, hepatitis, and tuberculosis. There are also social consequences associated with drug use such as drug-related crime. For example, individuals may be arrested because they engage in drug dealing to support their drug habits or commit crimes against other persons or property to raise funds to acquire drugs. Such arrests are often referred to as drug-induced crime. And of course, individuals may injure or kill themselves while under the influence of drugs. Estimates of drugged driving, automobile accidents, and drug-induced deaths from (e.g., overdose deaths) are common indicators of such consequences.

Social Context: This category of indicators reflects elements that are more community oriented that contextualize the drug problem. Policy makers, planners, and experts should take into account the socio-cultural-environmental factors that are at work or affected by the problem of drug use when they design and implement their demand reduction policy and programs. Figure 7 shows elements of the community's environment that are measurable.

Figure 7
Essential Indicators: Social Context



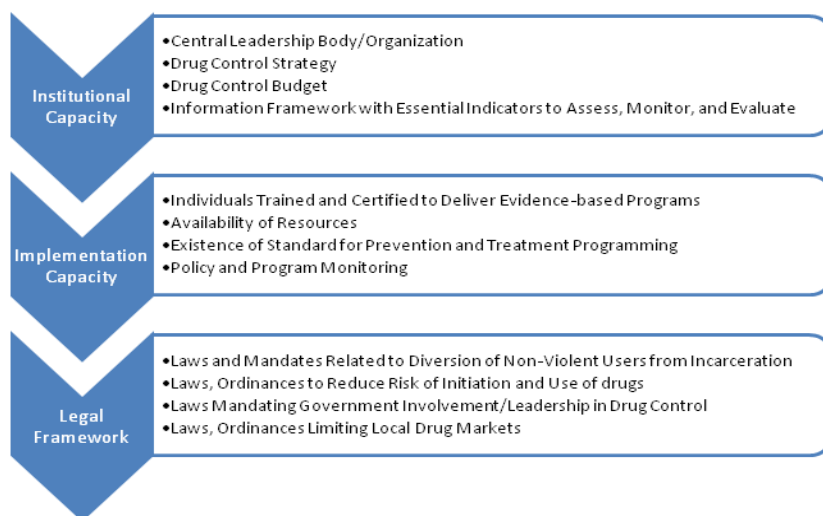
As the figure shows, the various groupings indicate that drug use is a problem that affects the social and economic dimensions of a community. The Community's social and economic health and well-being are being measured. Economic indicators might include poverty rates, employment rates, business growth, housing starts, and other similar indicators. The community's ability to provide affordable and accessible education and health services can be measured by enrollment rates, the number of health service providers, and the number of public service non-government organizations. One indicator that is often used is the public's perception of the health and safety of their community.

Infrastructure: This category of indicators seeks to measure a nation's capacity to design and deliver policies, programs, and practices backed up with a societal commitment, usually expressed in its legal framework, to solve the problem of drug use. Indicators for the Infrastructure category tend to fall into three areas: institutional capacity; implementation capacity; and the legal framework.

Figure 8 shows how these three areas work hand-in-hand to define and measure infrastructure. It is worth noting that many of the indicators recommended are those that have been used in the past by the Multilateral Evaluation Mechanism. With regard to institutional capacity, indicators track the existence of certain systems that are desirable to construct an evidence-based demand

reduction policy or program. One important factor is the existence of a centralized (usually government) body with the authority to bring government ministries or departments together to formulate a policy or program, fund and manage a budget to implement that policy, and engage in systematic monitoring and evaluation of the policy or program.

Figure 8
Essential Indicators: Infrastructure



With regard to implementation capacity, measures tend to focus on human capital. Indicators include the percentage of the prevention workforce certified to deliver prevention programs with fidelity. The percentage of the treatment workforce or programs certified as meeting nationwide standards with regard to the provision of care. It can also include indicators tracking the existence of formalized monitoring and evaluation systems or programs that allow policy makers, planners, and expert to track a demand reduction policy or program against long-term desirable outcomes for reducing the drug problem.

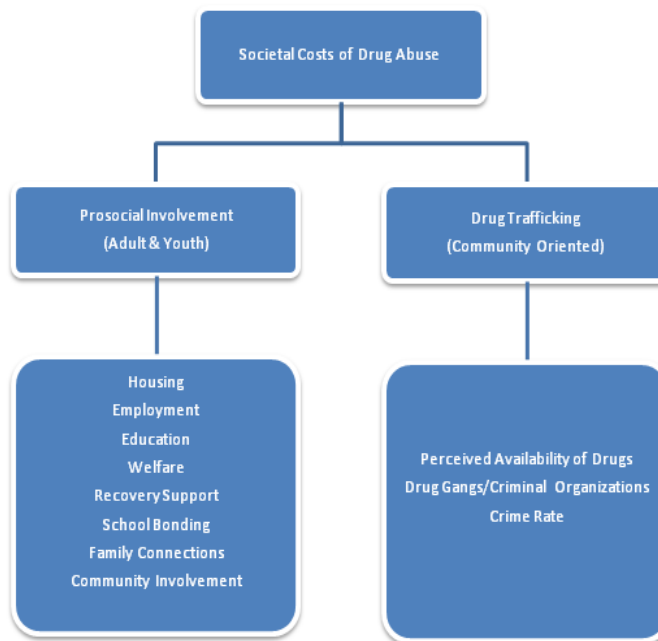
With regard to the legal framework, indicators could simply count laws or local ordinances that are in place designed to curb drug availability (e.g., reduce the number of or hours of operation of local liquor stores or bars or clubs), community health (e.g., curfews placed on young adults), and so forth. It can also include nationwide measures such as the existence of laws authorizing the central drug policy ministry or department, restricting drug precursors (e.g., tracking the volume and distribution of pseudoephedrine use to manufacture methamphetamine), or setting demand reduction workforce standards.

Social Integration: If demand reduction policies and programs do what they are intended to do, a nation should realize some level of reduction in drug use and its consequences. Measures of those

who cease problem drug use are common, for example, the period for which an individual has been drug free after the completion of treatment. A reduction in the recidivism rate is another indicator. Indicators that look at social involvement are also commonly used. The number or percentage of individuals employed, living in stable housing, reunited with their families, enrolled in some form of education or specialized training program, mitigation of social stigma, and involvement in community organizations demonstrate social integration. In addition, social integration should incorporate a gender perspective, given that men and women display differing drug use behaviors. Social integration gives priority to an approach based on inclusive social policies on drugs stemming from an intersectorial focus and shared social responsibility by the state. It emphasizes a perspective based on equity, which incorporates the drug problem into a concept of citizenship that engages all financial, human, and socio-cultural resources.

The achievement of social integration is good news for a community as it infers a lessening of the drug problem. Along with increased social integration assessments, drug trafficking and the criminal activity it generates should lessen. In this case, the public's perception of the availability of drugs and/or its perception of public safety are good indicators to use. Figure 9 shows the essential indicators that fall under this category. As the figure suggests, the most global indicator that can be used to assess an improvement in the drug problem is the change in the economic or societal cost of drug use. This measure includes the direct and indirect effects of drug use and captures societal costs along three lines: health-related costs; crime-related costs; and productivity lost to drug use.

Figure 9
Essential Indicators: Social Integration



The Role of Qualitative Information

The five categories of indicators are quantitative, meaning that they are numerical indicators derived for surveys or other information or surveillance systems. They are collected systematically and are reliable and valid representations of what they are intended to measure. To the statistician, validity means that the indicator truly measures what is intended to be measured (e.g., an individual's drug use during an interval of time). Reliability generally means that the means of obtaining the information will consistently be reproduced or obtained over time. But not all data are quantitative; They can be qualitative, meaning they tend to be descriptive and not necessarily measured or numerical in nature. Qualitative data may reflect expert opinion derived from focus groups or informal information obtained from interviews (for example, interviewing treatment providers about what they see as emerging drug trends). There are many other sources of qualitative information, but suffice it to say that qualitative data is descriptive and not necessarily reliable and valid as is the case with quantitative data. However, it can also be said, that qualitative data can be complementary to quantitative information.

There is no doubt that both quantitative and qualitative data play a significant role in formulating demand reduction strategies, policies, and programs. The focus of this document is on core indicators that are quantitative, but that focus is not meant to downplay the contribution of qualitative information. For example, schools may observe students using a new drug that is not typically observed in the community (e.g. methamphetamine) or using certain drugs in combination (alcohol and energy enhancing drinks) long before a formal survey quantitatively detects the change. In this case, the qualitative information may serve as a leading indicator of an emerging drug problem that might inform the needs assessment and should be included in decision-making about strategies, policies, and programs for demand reduction.

The Information Framework Challenges

The Working Group was tasked with identifying the essential indicators to comprise the information framework for demand reduction policies and programs. The Working Group participants did not address issues related to the availability, reliability, and quality of the different data indicators. While raised early in the Working Group meeting, it was the consensus view that member states individually or working through CICAD collectively, should address indicator gap issues.

Another topic deemed outside the realm of the Working Group's mandate was the consideration of the best means of obtaining the core indicators. The Working Group is able to make recommendations about the best survey or research tools that science has to offer, but to do so now would presume that the recommended information framework was acceptable to the member states. This topic, like the previous one, could be expanded if the Group of Experts in Demand Reduction decides that it would be worthwhile.

One conceptual challenge for the information framework was how to attribute certain indicators to a policy or program intervention. This issue of attribution is what researchers would otherwise think of in terms of a causal relationship. This process is best exemplified in terms of the drug use and crime nexus. Research has historically shown that problematic drug use and crime are linked in many ways. The two are directly related in that it is a crime to use, possess, manufacture, or distribute certain classes of drugs. Drugs are also related to crime through the effects they have on a drug user's behavior. For example, drug users may commit crimes against property or commit robberies in order to raise money to purchase drugs. Drug trafficking affects the community whenever it generates violence and other illegal activity. But, not all violent and property crimes are due solely to drug use or drug trafficking. Indeed, a person may be a career criminal who engages in burglaries and happens to use drugs as well. If the crime would have occurred, regardless of drug use, then the connection between drugs and crime is less clear. Thus, while research shows that drugs and crime are undeniably linked, and that the indicators proposed to track criminal activity are the most essential ones for the demand reduction information infrastructure, it is not always the case that policy makers, planners, and experts in the field can attribute a demand reduction policy or program solely to observed changes in those indicators.

The issue of attribution also emerged during the two-day subject matter expert Working Group meeting with regard to the discussion of social integration indicators. A successful prevention or treatment program will result in an individual's inclusion in the community. Ideally, the individual

will see improvements in his or her living condition, re-engagement with their family, friends, and workplace, and be crime-free, improving the public health and safety of the community. The indicators that are suggested for the demand reduction information framework will capture these changes. However, like drug-related crime, the improvements can be affected by other factors external to the policy or program intervention. For instance, if there is a recession, employment opportunities may not be available for those individuals who have successfully completed treatment programs. Or, if a community's housing occupancy rate is near capacity, finding a place to live may be a challenge. In other words, the issue of attribution can be challenging when it comes to using certain indicators.

In developing the list of indicators recommended for the demand reduction information framework, the Working Group participating in the two-day meeting recommended that the target population—senior policy makers, planners, and experts—be reminded of the limitations of data or indicators as well as their strengths. The 2009 CICAD Guide describing how to develop, monitor, and evaluate a national drug control policy provides information about how to use indicators, such as those proposed for the demand reduction information framework, to minimize misuse of information essential to demand reduction policies and programs.

Conclusions

The purpose of the subject matter Draft Committee meeting held on July 12-13, 2012 was to discuss and identify the essential indicators that CICAD's member states should use in formulating and implementing demand reduction policies and programs. This meeting occurred as a direct result of the thirteenth meeting of the Group of Experts on Demand Reduction held in Washington, D.C. from September 27-29, 2011. One directive from that meeting was a mandate to develop a document describing an information framework for science-based demand reduction policy or programs. This report summarizes the initial work done by the Chair of the Expert Group and CICAD Executive Secretariat to fulfill this mandate.

The Working Group who prepared this report did so with the understanding that the information framework should identify core indicators that prevention and treatment science have demonstrated as effective is shaping demand reduction policies and programs. While the potential list of indicators that could be selected is known by the subject matter experts in the Working Group to be lengthy, they selected those that are known to be the most useful and practical for conducting needs assessments and policy and program monitoring and evaluation.

In selecting the most appropriate indicators, the Working Group members determined that they needed a tool to guide their selection of the set of indicators. They developed a logic model that relates information or data to the science of prevention and treatment. The logic model framework that emerged over the two-day meeting is unique in that shows how data not only inform policy and program selection, but it can guide policy makers, planners, and other stakeholders down a path that ends in the mitigation of drug use and its damaging consequences. Even more importantly, the Working Group participants were able to categorize indicators in the information framework so potential users could discern their contribution to multiple areas such as

describing and monitoring the underlying drug problem and evaluating the outcomes of demand reduction policies and programs.

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Appendix A

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Appendix B

Demand Reduction Guidelines from the 2010 Hemispheric Drug Strategy, 2011-2015

Member states will pursue demand reduction activities under the following guidelines:

- Demand reduction is a priority component in guaranteeing a comprehensive, balanced approach to the world drug problem, given the abuse of drugs is a social and health problem that requires a multisectoral and multidisciplinary approach.
- Demand reduction policies should include as essential elements universal, selective, and indicated prevention, early intervention, treatment, rehabilitation and related recovery support services, with the goal of promoting the health and social well-being of individuals, families and communities, and reducing the adverse consequences of drug abuse.
- Demand reduction policies should be supplemented by methods to disseminate information on the risks associated with drug use, through the use of new information technologies and through the mass media, to inform the general public and the various target populations about available prevention and treatment services.
- Demand reduction requires, in accordance with the situation and magnitude of the drug problem in each country, the implementation of a variety of evidence-based prevention programs, aimed at distinct target populations, which together constitute a comprehensive system. From a methodological and design standpoint, these programs should be systematic, with specific measurable outcomes.
- It is necessary to invest in and provide a response to the specific needs of at-risk groups, including children, adolescents, and youth, both within and outside the education system and in other contexts, territories and communities. These higher vulnerability groups should be provided with education and skills development opportunities that promote healthy lifestyles

- Prevention efforts should also be aimed at the adult population through family, community and workplace prevention programs, including those that address emerging issues such as driving under the influence of drugs and drug-related accidents in the workplace.
- Drug dependence is a chronic, relapsing disease that is caused by many factors, including biological, psychological or social, which must be addressed and treated as a public health matter, consistent with the treatment of other chronic diseases.
- Access to treatment systems that offer a range of comprehensive therapeutic intervention models that are evidence-based and follow internationally-recognized quality standards should be facilitated. Treatment models should consider the needs of difference populations, taking into account factors such as gender, age, culture, and vulnerability.
- It is necessary to explore the means of offering treatment, rehabilitation and recovery support services to drug-dependent criminal offenders as an alternative to criminal prosecution or imprisonment.
- Recognizing that recovery from substance abuse and dependence is essential to the successful transition between incarceration and release, re-entry and social reintegration, treatment services should be made available as far as possible to offenders in correction facilities.
- Governments' relationships with academic and research institutions as well as specialized non-government organizations should be strengthened in order to foster scientific research and studies that will generate evidence on the various aspects of the demand for drugs, in order to contribute to the formulation of public policies and increased knowledge on the subject.
- Continuing education and training for professionals, technicians and others involved in implementing drug demand reduction activities should be promoted and strengthened.
- Drug demand reduction programs should be subject to ongoing monitoring and scientific evaluation.

Appendix C

Essential Indicators by Indicator Category⁵

Epidemiology of Drug Use (see Figure 5)⁶

Subcategory	Indicator	Usefulness for Target Audience
Risk	Youth perception about dangers of drug use	Leading indicator ⁷ in that prevention research shows that changing attitudes about the dangers of drugs precedes changes in drug use incidence and prevalence. A softening of attitudes usually means that drug use is an emerging problem.
	Perceived ease of access or availability of drugs	Leading indicator in that prevention research shows that ease of access positively correlates with drug use incidence and prevalence.
	Perception that peers are engaged in problem behaviors	Leading indicator in that youth who believe that their peers are engaged in drug use are more likely to initiate themselves in drug use.
	Youth perceptions of parental approval of drug use	Leading indicators in that youth who believe their parents do not perceive drug use as problematic are likely to engage in drug use.
	Strong youth parent and youth relationship	Leading indicator as well as a good indicator for evaluation the outcome of a prevention program designed to strengthen parental bonds that result in reduced drug use.
Incidence	Average age of onset of drug use	Indicator is both a leading indicator as well as an indicator of prevention program effectiveness.

⁵ Note: Appendix D discusses how many of these indicators may be presented by age, sex, type of drug, geographic representation, and so forth. Indicators can be expressed as total numbers or as rates, usually as a percentage of the total population or per unit of population such as per 100,000 persons (common to crime statistics). For example, drug use prevalence can be broken down by age, sex, type of drug, frequency of use, geographic areas like urban versus rural. This and the other tables in this section present the indicators as general concepts for consideration for inclusion into the demand reduction information framework.

⁶ Note: Appendix D discusses how many of these indicators may be presented by age, sex, type of drug, geographic representation, and so forth. Indicators can be expressed as total numbers or as rates, usually as a percentage of the total population or per unit of population such as per 100,000 persons (common to crime statistics). For example, drug use prevalence can be broken down by age, sex, type of drug, frequency of use, geographic areas like urban versus rural. This and the other tables in this section present the indicators as general concepts for consideration for inclusion into the demand reduction information framework.

⁷ A "leading indicator" is one that identifies an emerging drug problem; more generally, it also can signal changes in various cycles that characterize a drug epidemic.

	(sometimes called initiation or first-time use)	Research shows that delaying the onset of drug uses translates into less problematic drug use later in life. Increasing the average age is a positive prevention outcome.
Prevalence	Past month, past year, and lifetime use of drugs	Indicator of the extent of drug use within a population (general, household, schools). Regular drug use is an indicator of emerging potential problem drug use.
Problem Drug Use	Individual who are abusers or dependent	Indicator of drug abuse or dependence that is associated with serious health, crime, socioeconomic consequences, and exclusion from the community.

Consequences of Drug Use (see Figure 6)⁸

Subcategory	Indicator	Usefulness for Target Audience
Health	HIV prevalence/incidence	Indicators reflect two measures: new cases (incidence) and existing cases (prevalence). Demand reduction policies and programs would seek to reduce incidence through prevention and manage the prevalence through treatment.
	STD prevalence/incidence	Indicators reflect two measures: new cases (incidence) and existing cases (prevalence). Demand reduction policies and programs would seek to reduce incidence through prevention and manage the prevalence through treatment.
	Hepatitis C prevalence/incidence	Indicators reflect two measures: new cases (incidence) and existing cases (prevalence). Demand reduction policies and programs would seek to reduce incidence through prevention and manage the prevalence through treatment.
	TB prevalence/incidence	Indicators reflect two measures: new cases (incidence) and existing cases (prevalence). Demand reduction policies and programs would seek to reduce incidence through prevention and manage the prevalence through treatment.
	Drugged-related traffic accidents	Indicator reflects consequence to the drug user and the community from their drug using behavior.
	Drug-related accidents in the workplace	Indicator reflects consequence to the drug user and the community from their drug using behavior.
	Drug-related emergency room visits	Indicator reflects consequence to the drug user and the community from their drug using behavior.
	Individuals in treatment	Indicator captures information on the demands on the health care system by users who seek to end their abuse or dependence. Combined with system capacity indicator (see Social Context) and treatment need indicator (see Epidemiology of Drugs), this indicator provides information on treatment utilization and need.

⁸ It is important to recall the theme of this document that the information framework is to focus on the individual and not the drug. Crime and health indicators presented under this “consequences” category focus on the individual. Crime and health indicators that affect the community are reflected under the “social epidemiology” category of indicators presented next in the indicator targeting public perception of health and safety.

	Treatment success	This indicator is a measure of effectiveness. (Note: Given that addiction is a chronic disease, it is likely that there will be multiple treatment events occur before long-term abstinence is realized. In other words, science says that the chronic nature of the disease requires multiple treatment episodes with recovery and support services after treatment to be a practical measure.)
Crime (focused on the individual)	Drug-related crime	Indicator would include drug-related and drug-induced crime (committing a crime to buy drugs.
Mortality	Drug-related mortality	Indicator provides information about the most severe consequence of drug use to the individual and the community.

Social Context (see Figure 7)

Subcategory	Indicator	Usefulness for Target Audience
Economic, Education, & Other Community Indicators	Employment rate	Indicator of the capacity of the community to provide immediate employment opportunities for recovering drug users.
	Poverty rate	Indicator of the well-being of the community.
	Housing occupancy rates	Indicator of the capacity of the community to provide accessible housing so returning former drug users can have places to live.
	Education/Vocational education capacity	Indicator of economic health and the capacity of the community to provide accessible educational opportunities for recovering drug users.
	New Business starts	Indicator of economic health and the capacity of the community to provide accessible employment opportunities for recovering drug users.
	Public perception of health and safety	This indicator provides information about how the public views the overall health of the community and their ability to engage in community activities free of the threat of crime.
	Community Perception of Risk	This indicator provides information about how the community perceives harms associated with specific categories of drug use.
Health Services	Availability of treatment for drug abuse and dependence	Indicator of a community understanding that addiction is a disease requiring specialty treatment services to promote individual and community health. Note: While traditionally an indicator of the capacity of the health system to provide treatment and therefore usually included in the “Infrastructure” category of indicators, it is included here to reflect the fact that under a public health approach and with the recognition that addiction is a disease, that communities should embrace the idea of providing specialty treatment services for those who suffer from addiction.
Social Organizations	Public service organizations targeting drug	Indicator reflects receptivity of the community for social inclusion of recovering drug users.

	users (with and without criminal histories) for community support services	
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Infrastructure (see Figure 8)

Subcategory	Indicator	Usefulness for Target Audience
Institutional Capacity	Existence of a centralized office at the national/federal level that organizes and implements drug policy	Indicator reports on the capacity of a member state to develop and manage centrally its drug policy and programs.
	Existence of a national/federal drug control budget to implement drug policy	Indicator shows how a member state organizes and allocates resources for purposes of implementing its drug policy and programs.
	Existence of indicators of the nature and extent of the drug problem, including drug use consequences	Indicator shows the capacity of a member state to conduct a balanced and comprehensive assessment as well as monitor, and evaluate drug policies and programs.
Implementation Capacity	Officially licensed specialty treatment providers	Indicator shows the extent to which existing treatment system capacity meets national standards of care to treat problem drug users.
	Treatment staff certified to provide minimum level of treatment care services	The indicator provides information about the capacity of the workforce to deliver services with fidelity so that expected outcomes are achieved.
	Prevention workforce certified to provide minimum level of services	The indicator provides information about the capacity of the workforce to deliver services with fidelity so that expected outcomes are achieved.
	Individuals needing treatment	Indicator provides important information about the demand drug users potentially place on the treatment system.
	Treatment rate	Indicator shows relative treatment demand met by existing treatment system capacity.
	Treatment client satisfaction	

Legal Framework	Legislation authorizing or mandating a centralized organization to develop and implement national/federal drug policy	Indicator is currently used in the MEM to identify member states that have formally mandated an organization to develop and implement drug policies and programs.
	National law on legal blood alcohol concentration for driving a vehicle	Indicator tracks alcohol use and driving under the influence.
	Laws mandating treatment as an alternative to incarceration	Indicator reflects the research that shows that treatment of non-violent drug users is effective and less expensive than incarceration.
	National laws and/or regulations for penal, civil and administrative sanctions against the diversion of pharmaceutical products.	Indicator tracks laws aimed at curbing prescription drug abuse and is currently used in the MEM.

Social Integration (see Figure 9)

Subcategory	Indicator	Usefulness for Target Audience
Social Involvement	Employment or return to/stay in school	Indicator would track changes in employment and education resulting from prevention policies and programs.
	Stable living condition	Indicator would measure change in number of recovering drug users in a stable housing situation. (Alternative indicator might be a measure of homelessness among drug users in the community.)
	Criminal justice involvement (recidivism)	Indicator would track changes in criminal activity resulting from prevention policies and programs.
	Recovery/support services	Indicator would count the number of recovery/support services available to enable individuals in recovery to remain drug free.
	Family Connections	Indicator would measure the number of individuals connected to their families, which research shows to be a protective factor that mitigate potential drug use.
	Public services accessible to aid in support of recovery	Indicator would measure the number of individuals connected to community support services, which research shows to be a protective factor that mitigate potential drug use.
	Community Connections	Indicator would measure community resident satisfaction with local services and recreational opportunities.
Drug Trafficking	Perceived availability of drugs	Indicator measures the nature and extent of the drug problem in a community and the accessibility of drugs.
	Crime rate	Indicator tracks changes in public's perception of public safety which correlates with reductions in drug use and drug-related crime.
	Gang Involvement/Activity	Indicator tracks changes in public's perception of public safety which correlates with reductions in drug use and drug-related crime.

Appendix D

Some Data Reporting Conventions

Measures of drug use prevalence are generally collected as follows: Lifetime prevalence answers the question as to whether an individual answers “yes” to having ever tried a drug at least once in their lifetime); Past year prevalence (answers the question as to whether an individual reports having tried a drug at least once in the 12 months prior to taking the survey); and Past month (answers the question as to whether an individual reports having tried a drug at least once in the 30 days prior to taking the survey). Some surveys may ask about even more frequent drug use, but past month tends to be the most used indicator for assessing a population’s current or regular drug use.

The population that is covered by most surveys of drug use tends to include youth in school or youth and adults in household populations. School surveys may reach youth around 12 years of age and older (usually up to 18 years of age) while general household surveys may include population aged 12 and older (in the United States) or 16 to 65 years of age (in most other Western Hemispheric surveys).

The indicators presented in this information framework for demand reduction may be reported disaggregated by age, sex, marital status, educational attainment, and special populations.

The indicators presented in this information framework for demand reduction may also include a range of licit and illicit drugs (psychoactive substances). The list reported by the OID includes: tobacco; alcohol; tranquilizers with prescription (valium, lexotanil); stimulants without prescription (naftas, pegamentos, popers); marijuana; cocaine; cocaine base paste; crack; extasis; hallucinogens (LSD, peyote, san pedro, PCP, mescaline); hashish; heroin; opioids, morphine (without prescription; ketamine; amphetamines; and other drugs.