# Development of a System for Registry of Information on Drug Use in Mexico

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*Mexico's need for uniform information about drug abuse led to creation of an information collection system in 1986. This system, known as the System for Registry of Information on Drugs (SRID), currently covers the Mexico City metropolitan area. Plans call for it to be expanded in two phases—so as to provide coverage first of the states near the U.S. border and those with substantial tourism, and then to cover the nation as a whole.*

*This article describes the data collection procedures used and the results of the four SRID assessments conducted in the Mexico City area from mid-1986 through mid-1988. These results indicate there were about nine male drug abusers in this period for every female; that drug use typically began young; that the drugs most commonly abused were marijuana, inhalants, alcohol, tobacco, and tranquilizers; that cocaine use was limited but apparently increasing; and that most of the drug abusers interviewed had not completed secondary school, were not in school at the time interviewed, and had relatively low socioeconomic status.*

Drug abuse in Mexico is considered a priority public health problem. Research on drug abuse, begun in the 1960s, is performed in a number of areas and has been directed mainly at evaluating the incidence and prevalence of the problem and identifying the psychosocial variables involved.

The principal research methods employed have consisted of home, school, and other surveys of specific population groups, together with ethnographic techniques such as the "snowball" method (*1*) adapted to the Mexican drug subculture in recognition of the apparently high risk faced by the floating and marginal population.

The information available (*2–4*) indicates that prevailing levels of drug abuse are not as high as those in the urban areas of some industrialized countries. However, the prevalence of drug abusers is relatively great among minors and adolescents with low levels of schooling, and also among the unemployed, the underemployed, and casual laborers—many of whom are first-generation rural immigrants to marginal urban areas and who belong to dysfunctional families within which violence and alcohol or drug use are common.

The most commonly used drugs are inhalants and marijuana—and, to a lesser degree, cocaine among men and tranquilizers among women. There is also a geographic pattern of abuse that indicates significantly greater use of cocaine, heroin, and tranquilizers in the northern border states and tourist areas.

## DATA COLLECTION

Unfortunately, the information available before 1986 was heterogeneous, coming from a variety of different sources

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with their own criteria, instruments, and analytical procedures. Consequently, this information was inadequate for developing a reliable assessment of principal drug abuse trends (*4*).

The need for homogeneous information capable of supporting preventive efforts led to development of an information collection system known as the System for Registry of Information on Drugs (SRID). The National Council Against Addictions assigned the task of creating this system to the Mexican Institute of Psychiatry (IMP).

At the heart of the system is a center that collects data from various sources using previously defined criteria and procedures. The center, which is located in Mexico City and has been operating since the second half of 1986, also processes and analyzes the information gathered and reports its findings (*5, 6*).

The SRID's overall goal is to define drug abuse trends. More specifically, it employs periodic evaluations in order to identify the drugs involved, prevailing consumption patterns, sociodemographic characteristics of the users, and changes in drug consumption trends.

Initial plans called for implementing this system in three phases. During the first phase, now accomplished, the system was made to cover the Mexico City metropolitan area. In the second phase various states are to be included, principally those close to the U.S. border and ones with tourist areas. During the third phase national coverage will be sought.

To date the SRID has conducted five evaluations. The results of these evaluations, which have been reported previously (*7–14*), will be discussed below.

The questionnaire used by the SRID is known as the "Individual Drug Consumption Record." Designed especially for this purpose, its development was based on the relevant information then available on drug abuse in Mexico (*1–4*), the experiences of participating institutions, reports on experience with similar systems in countries including the United States, Canada, and Hong Kong (*5, 15, 16*), and suggestions of the World Health Organization (WHO) (*17*).

The information obtained through the instrument is as follows: data identifying the case, sociodemographic data, reasons for the individual's admission to the institution involved, problems associated with the individual's drug consumption, and patterns of drug use.

The instrument can be used by physicians, psychologists, or social workers—who with a small amount of training can administer it in five minutes as part of the normal procedure for admission to the participating institution.

In addition to the questionnaire data, certain other data are obtained from each institution—such as the estimated size of the population within its geographic area of influence—in order to have a broader base of knowledge for interpreting the data.

## METHODS AND PROCEDURES

As a point of departure for developing the SRID, visits were made to key health and justice system institutions—including hospitals with emergency facilities, psychiatric hospitals, drug abuse treatment centers, homes for minors, and reformatories—that had previously agreed to collaborate with the National Program Against Addiction. During these visits the plans for the system were described and each institution was evaluated—among other things as to the kind of population it covered, its work schedules, the services it provided, and the availability of personnel who could work with the SRID.

This evaluation made it possible to identify those institutions suited for participation. At each of these institutions a

person responsible for evaluation was designated along with the necessary number of interviewers—who together constituted the evaluation team. The members of this team received training—including orientation regarding what the SRID was, the system's aims, how to administer the questionnaire, interview techniques, identification of various drugs and their effects, and exercises in role-playing. The participating institutions also received supplementary training support literature that enabled the team to train new interviewers as required.

The SRID depends upon two cross-sectional evaluations conducted for 30 days (during June and November) every year. The SRID questionnaire is applied to all drug abuse cases detected during these evaluation periods.

The decision to have two 30-day evaluation periods per year, which was made in concert with the participating institutions, was based on experience gained by previous studies of drug use patterns (*1–4*). The arrangement was made flexible, however, so that the timing could be modified to suit the dynamics of the situation observed.

The procedure used during each evaluation period is as follows: All people admitted to each participating institution are asked if they have used some drug not medically prescribed at least once in their lives with the deliberate intent of inducing a "high." If the response is affirmative, the matter is considered a drug abuse "case" and the instrument is administered to the respondent. Cases of accidental intoxication in the workplace or home, such as those that sometimes affect small children, are not included in the evaluation.

During each evaluation period personnel from the Mexican Institute of Psychiatry (IMP) supervise administration of the instrument and make themselves available to answer any questions that may arise. Upon conclusion of the evaluation period, the completed questionnaires are sent to the IMP for processing and analysis. The results of the analysis are then summarized in a report that is delivered to each participating institution as well as to health authorities and investigators working in the drug abuse field.

## RESULTS

In general, the most relevant data obtained through these evaluations are included in the summary reports. However, it is recognized that the collected information could be analyzed in any of various ways and that more specific information might be needed. In such cases the information involved can be requested from the IMP.

The analysis provided in the summary reports includes the following epidemiologic indicators: prevalence (the number of cases existing at a given time, as indicated by the evaluations); incidence (the number of new cases occurring over a given time, in this instance over one-month and one-year periods); the subgroups affected, these being defined in terms of such variables as sex, age, level of schooling, occupation, and admitting institution; and factors associated with the various subgroups affected, such as the kinds of problems that subgroup members using drugs perceive as being related to drug abuse.

Various drug abuse trends found through the collected data and reported by SRID since 1986 (*7–11*) are as follows:

### Sociodemographic Characteristics of Drug Abusers

As indicated in Table 1, about nine male drug abusers were found for every female drug abuser within the study population. The age group with the highest

**Table 1.** Distribution of the drug abusers studied within each of five sociodemographic categories, by SRID evaluation period; Mexico, 1986–1988.

| Sociodemographic variables | % of study subjects, by evaluation period | | | |
|---|---|---|---|---|
| | November 1986 (n = 608) | June 1987 (n = 481) | November 1987 (n = 411) | June 1988 (n = 398) |
| *Sex:* | | | | |
| Male | 93.1 | 89.4 | 86.4 | 90.5 |
| Female | 6.8 | 10.8 | 13.6 | 9.5 |
| *Age group in years:* | | | | |
| <12 | 0.5 | 0.8 | 1.2 | 1.0 |
| 12–14 | 10.0 | 11.0 | 12.0 | 10.1 |
| 15–19 | 55.4 | 40.7 | 45.1 | 48.1 |
| 20–24 | 16.6 | 25.8 | 20.2 | 15.6 |
| 25–30 | 11.6 | 11.2 | 11.5 | 12.1 |
| >30 | 5.8 | 10.4 | 10.0 | 13.1 |
| *Socioeconomic level:* | | | | |
| Low | 69.1 | 72.3 | 58.1 | 56.7 |
| Intermediate | 28.4 | 26.6 | 40.5 | 42.5 |
| High | 2.5 | 1.1 | 1.4 | 0.8 |
| *Education:* | | | | |
| No schooling | 3.4 | 4.7 | 2.6 | 6.9 |
| Incomplete primary | 22.5 | 24.3 | 24.2 | 26.2 |
| Complete primary (grades 1–6) | 20.5 | 18.0 | 25.3 | 19.0 |
| Incomplete secondary | 33.0 | 28.3 | 24.9 | 26.2 |
| Complete secondary (grades 1–9) | 9.4 | 11.7 | 7.1 | 10.1 |
| Preparatory or technical (grades 1–12) | 9.0 | 9.7 | 10.8 | 5.6 |
| Professional (16 years of school) | 2.2 | 3.3 | 5.2 | 6.0 |
| *Occupation:* | | | | |
| None | 29.5 | 29.1 | 25.7 | 26.3 |
| Housewife | 3.1 | 3.1 | 2.5 | 1.2 |
| Student | 7.3 | 16.1 | 8.0 | 11.8 |
| Farm worker | ... | ... | ... | 0.8 |
| Underemployed, casual laborer | 44.4 | 32.2 | 36.2 | 41.9 |
| Office worker, merchant, or professional | 15.7 | 19.5 | 27.6 | 18.0 |

*Source:* A. Ortiz, *et al.* (6–10).

percentage of drug abusers was the 15–19 year group, followed in order by the 20–24, 25–30, and 12–14 groups. These data suggest that the adolescent population is at high risk of drug abuse.

Most of the study subjects were found to come from lower socioeconomic strata, although this could be attributable to the fact that to date the SRID has included only public service institutions commonly admitting people in these strata. (Subsequent research should include evaluations at private hospitals.) In this same vein, the rising percentage of drug abusers observed at the intermediate socioeconomic level appears noteworthy.

The data on education bear a close relation to the principal age groups involved. It should be noted that most of the drug abusers studied had not completed secondary school. It is also noteworthy that the small percentage of study subjects with the highest ("professional") level of schooling increased progressively over time at each evaluation from 1986 to 1988.

Regarding occupations, it seems significant that over 60% of all the drug abusers studied were unemployed, underemployed, or employed only as casual laborers. This finding, which reflects the large proportion of youths who are not in school and who have no stable jobs or are

unemployed, is supported by the data on education indicating that there are relatively few drug abusers in school compared to the number unemployed or underemployed.

## Drug Abuse Prevalences

Table 2 shows the types of drugs that the study subjects said they had used at least once in their lives, together with the user percentages involved. As can be seen, relatively high percentages of study subjects said they had used marijuana, inhalants, alcohol, or tobacco. Smaller percentages reported using tranquilizers, hypnotic sedatives, or stimulants though there were substantial fluctuations in the reported data from one evaluation period to the next. According to the collected data, use of cocaine appears to be increasing; but the percentage of cases is still very low, and further studies should be undertaken to confirm this trend.

Table 3 shows that many similar trends were observed with respect to "period prevalence" (drug use in the month preceding the interview). Again, the most commonly abused drugs were marijuana, inhalants, alcohol, tobacco, and tranquilizers. In addition, the table shows something noteworthy about cocaine abuse: namely, while consumption of this drug at some time in life appears to be on the rise, the percentage of study subjects using it within a month of the interview has varied. This strongly suggests that cocaine users tend to be multiple drug users, a finding that agrees with the results of other research (4). The percentage of subjects using heroin in the last month remained consistently low, although it fluctuated considerably because of the small number of cases.

## Drug User Profiles

Sociodemographic profiles of the following types of drug users were studied: users of marijuana and inhalants, because these substances are used so often; abusers of tranquilizers, because these are the drugs most used by women (even though the percentage of women using them is lower than the percentage of men using marijuana or inhalants); and users of cocaine and heroin, because use of these drugs is expected to increase in coming years.

In general, most of the users of these

**Table 2.** Percentages of study subjects reporting use of different types of drugs at some point in their lives, by SRID evaluation period; Mexico, 1986–1988.

| | % of study subjects, by evaluation period | | | |
|---|---|---|---|---|
| Substance | November 1986 (n = 608) | June 1987 (n = 481) | November 1987 (n = 411) | June 1988 (n = 398) |
| Marijuana | 63.6 | 70.8 | 58.6 | 70.4 |
| Cocaine | 1.6 | 3.5 | 3.9 | 4.0 |
| Hallucinogens | 3.9 | 2.1 | 6.1 | 3.0 |
| Inhalants | 57.0 | 55.3 | 59.6 | 63.6 |
| Heroin | 0.5 | 0.8 | 0.5 | 1.0 |
| Other opiates | 0.6 | 0.2 | 0.2 | 1.0 |
| Stimulants | 5.0 | 9.4 | 3.4 | 5.5 |
| Hypnotic sedatives | 4.7 | 2.9 | 1.5 | 3.0 |
| Tranquilizers | 9.2 | 13.1 | 13.1 | 21.4 |
| Alcohol | 36.6 | 42.5 | 50.6 | 63.8 |
| Tobacco | 31.7 | 40.3 | 45.7 | 59.8 |
| Other substances | 1.8 | 4.4 | 3.7 | 4.5 |

*Source:* A. Ortiz, *et al.* (6–10).

**Table 3.** Prevalence of drug use in the last month. SRID, Mexico, 1986–1988.

| Substance | % of study subjects, by evaluation period | | | |
|---|---|---|---|---|
| | November 1986 (n = 608) | June 1987 (n = 481) | November 1987 (n = 411) | June 1988 (n = 398) |
| Marijuana | 41.1 | 49.9 | 34.3 | 50.3 |
| Cocaine | 1.3 | 2.1 | 1.2 | 1.8 |
| Hallucinogens | 2.7 | 2.1 | 2.4 | 1.3 |
| Inhalants | 42.4 | 45.3 | 44.3 | 46.5 |
| Heroin | 0.1 | 0.4 | 0.2 | 1.0 |
| Other opiates | 0.6 | 0.2 | 0.2 | 1.0 |
| Stimulants | 3.6 | 2.9 | 1.2 | 3.5 |
| Hypnotic sedatives | 3.1 | 2.9 | 1.0 | 3.0 |
| Tranquilizers | 5.4 | 9.4 | 7.8 | 14.8 |
| Alcohol | 24.8 | 42.5 | 35.0 | 45.7 |
| Tobacco | 23.6 | 40.3 | 40.1 | 50.2 |
| Other substances | 1.3 | 4.4 | 1.2 | 3.5 |

*Source:* A. Ortiz, *et al.* (6–10).

drugs were males. Inhalant use typically began at earlier ages than use of the other drugs, and most of the users were in the 15–19 age group. Substantial percentages of those using all these drugs except tranquilizers and cocaine were bachelors, which suggests a relationship between the age of the user and the drug consumed.

With regard to socioeconomic levels, marijuana and inhalant users tended to come from the lower levels, while users of tranquilizers and (especially) cocaine tended to come from the upper levels.

In a similar vein, inhalant and marijuana abusers tended to be school dropouts or have relatively little formal education, while abusers of other drugs tended to have relatively more schooling.

Regarding the study subjects' occupations, use of marijuana and inhalants was particularly widespread among those who were unemployed, underemployed, or employed as casual laborers. In contrast, cocaine use was associated with better-quality employment.

Similar trends were observed with respect to the age at which drug abuse began, with use of the "popular" drugs (marijuana and inhalants) beginning early and cocaine use beginning relatively late. In general, the age group at greatest risk of starting to abuse "popular" drugs was the 15–19 group.

The age of first drug use also bore a relationship to the age of the users, since most of the users were young people. In the cases of marijuana, inhalants, tranquilizers, and cocaine, the year in which the highest percentage of users were initiated fell in the 1985–1987 period. The use of heroin began to be reported in 1988.

Finally, it was found that besides tending to use several drugs, cocaine and heroin users typically had greater problems associated with their drug abuse than did other members of the study population.

## CONCLUSIONS

The System for Registry of Information on Drugs has made it possible to assess key drug use trends in Mexico City; and dissemination of the various SRID evaluations' results up to the present time has made both researchers and health authorities more aware of the drug problem's importance.

The number of institutions participating in the system should be expanded, and the Mexican states along the U.S.

border should be included in the system—since they appear to share drug problems with common features. It is also important to include major tourist areas within the system, because preliminary observations indicate high levels of drug abuse, especially cocaine abuse, in these areas.

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