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Drug Abuse Deaths in Nine Cities:

A Survey Report

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in Nine Cities:
A Survey Report

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The NIDA Research Monograph series is prepared by the Division of Research of the National Institute on Drug Abuse. Its primary objective is to provide critical reviews of research problem areas and techniques, the content of state-of-the-art conferences, integrative research reviews and significant original research. Its dual publication emphasis is rapid and targeted dissemination to the scientific and professional community.

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Foreword

The study of drug abuse deaths, while not a topic we approach
with eagerness, is an essential contribution to epidemiology, for
these deaths are the ultimate sequelae of the drug dependence syn-
drome. The death of a young person dependent on drugs is often
the first warning to a community that it has a drug problem; and
because so many of the deaths occur among otherwise physically
normal young adults, they truly are tragedies. These deaths can
be a barometer, albeit not a perfect one, of the extent and serious-
ness of drug abuse.

The present study looks at the characteristics of the decedents,
the system of data collection, and the activities involved in cer-
tifying a death. These kinds of data have never before been col-
lected in depth on as comprehensive a sample of cases. The find-
ings should serve as a reference for other studies of such inci-
dents for years to come. The conclusions about consistency of
data from medical examiners' and coroners' offices show this to
be a problem area. We hope that awareness of present inconsis-
tencies will provide an impetus for the creative thinking that
is needed to improve the usefulness of epidemiological information
from this source.

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Chapter 1

Introduction and Overview

Deaths resulting from abuse of drugs are the ultimate, irreversible tragedy in the scale of individual and social costs of that abuse. Measurement of types and numbers of these deaths plays an important part in enabling us to understand the nature and extent of the whole problem of drug abuse, here defined as nonmedical use of psychoactive drugs. Yet, as is often the case when a new social problem erupts, the established systems of data collection do not serve us well in providing information specific enough to form a basis for accurate assessments. Drug abuse deaths cannot be precisely measured by the mortality statistics derived from standard death certificates. Statistics such as those regularly issued by the National Center for Health Statistics on numbers and types of deaths use one broad category for drug-related causes of death; they do not distinguish between licit and illicit drugs, nor between drugs used for medical and nonmedical purposes. The present study grew out of the need to collect these kinds of previously unavailable data.

BACKGROUND

By 1970 there was heavy pressure for valid indicators of drug abuse in the nation, and clearly a new source of data was required. The project of which the present study is a part was launched to help meet that need. The larger project also included two conferences, a toxicology proficiency study of nine laboratories, and a number of publications, among them the Guide to the Investigation and Reporting of Drug Abuse Deaths (Gottschalk et al. 1977). The goals of the project, and especially of this study, evolved over the five-year period from 1972 to 1977 as a reflection of changing national interest and organizational structures.

The initial goal was to develop a reporting form which would provide detailed information on persons who died from the abuse of psychoactive drugs. The intention was to distribute this form to medical examiners and organizations whose use of it could provide needed information. At about the same time, in its system for monitoring drug abuse deaths on a regular basis, the Drug Abuse Warning Network (DAWN) utilized some of the questions developed in this study.

The reporting form was revised by the investigators after feasibility testing, and the decision was made to conduct a formal survey of nine

cities, using the revised form to determine patterns of drug abuse deaths. Two years later it was decided to repeat the survey, with minor additional revisions in the form, to observe what, if any, changes had taken place in the pattern of deaths.

In their detailed queries about the amounts and types of drugs used, the circumstances surrounding each death, and the procedures used to determine the cause and mode of death, these surveys provide more depth than data gathered from simple death certificates or the DAWN forms (Drug Enforcement Administration 1973, 1974, 1975). In addition, this report suggests that types of information and definitions emanating from the medical examiners' offices are not adequate sources of data for national assessment of drug abuse deaths. There are good reasons to believe, as will be seen in this report, that such data may be "soft" and should be accepted as at best crude estimates of the extent and causes of these deaths.

One indicator that created doubts about the accuracy of the data estimating drug abuse deaths was a toxicology proficiency study that was carried out concurrently with the surveys described here. Detecting and categorizing drug abuse deaths inevitably depend to a great extent on the accuracy of the laboratory assays used in investigation of the deaths.

In the toxicology proficiency study, results of which have been published elsewhere (Dinovo et al. 1976 a, 1976b), five standard drug samples, each containing one to seven commonly encountered drugs, were sent to the medical laboratories of the nine cities selected to report in the surveys. Two separate sets of five "unknown" drug samples were sent, one to two years apart, with graded amounts of information. The assays showed surprisingly large deviations from the results to be expected based on the content of the samples. The laboratories often reported the absence of drugs which were in fact present in the test samples. This proportion of false negatives ranged up to 33 percent for some samples. The ability to assay less familiar drug types varied among the laboratories; however, accuracy of quantitation increased greatly in proportion to the amount of information supplied with each sample.

SURVEYS OF CASES

As has been stated, the investigators developed a form that could be used for uniform reporting of psychoactive drug-induced or psychoactive drug-related deaths. After the form was pretested and revised, it was employed to collect cases over a specified time period from coroners or medical examiners in nine major urban centers: Chicago, Cleveland, Dallas, Los Angeles, Miami, New York, Philadelphia, San Francisco, and Washington, D.C. In the first survey, 1972-1974, 2000 cases were collected. In 1975 a second survey collected 1000 cases in the same nine cities to determine whether there were changes over time in characteristics associated with the deaths.

The specific data sought in the surveys included demographic characteristics, circumstances surrounding each death, details of toxico-

logical and postmortem investigations, mode of death (accident, suicide, homicide), and any treatment or management of a case prior to death.

Crucial to the usefulness of the reporting form was the development of a schema designed to make important distinctions about the role of a drug in the death and the relationship of this to the mode of death:

  1. Was the drug the proximal cause of death (induced) or was it merely incidental or coincidental (related)?
  2. If the death was drug-induced, did the drug act alone in its pharmacological action, in combination with another agent(s) such as alcohol, or was death caused by an idiosyncratic drug effect?
  3. If the death was only drug-related, what were the other conditions that caused death?

One of the original aims of the survey was to portray the incidence of drug-involved deaths nationwide as represented roughly by these nine urban centers. Although the nine were not a sample of cities, nor did the cases represent rural and other areas, it was thought that their characteristics as a total set of cases would be illuminating. Comparability of time periods and definitions across cities proved so difficult to obtain, however, that this aim was abandoned. Most of the analysis was made with data from each city kept separate, though total numbers are available for inspection.

RESULTS OF THE SUFUEYS

The results of the surveys and some reflections on their meaning are summarized in the remainder of this chapter.

The role of a drug or drugs in each death was tabulated first. About two-fifths (41 percent) of the deaths reported in Survey 1 were associated with one drug alone; one-third (34 percent) were associated with one or more drugs in combination with each other or with alcohol In a small percentage of cases (7 percent) a preexisting and potentially fatal disorder was also present. In 3 percent of cases, a medical disorder related to drug abuse was a factor in the death. Drugs were found only coincidentally in another 15 percent of cases.

Information on the events surrounding each death was then tabulated. In both surveys, the drug abuse treatment status of over 40 percent of cases was unknown. In those cases where treatment status was known, very few individuals had been enrolled in a treatment program. (It should be remembered that these cases also included suicide by drugs, in which treatment for drug abuse would not be expected.) Also, only a few persons had received emergency treatment immediately prior to death, a fact that may explain in part why they died. When emergency treatment was given, it was provided by physicians and consisted primarily of assisted breathing, tracheal help, medication, or heart massage. Investigations were performed at the site of death in about 80 percent of the cases. Needle marks and tracks were the

most common external evidence of poison or drug ingestion; drug paraphernalia were found about one-third of the time, and drugs were found at the scene in about one-fourth of the cases.

The two major types of examinations off-site are, of course, postmortem and toxicological. Postmortems were carried out in almost all cases, and, with few exceptions, by physicians with formal training in pathology. About half the autopsies included microscopic examinations and about one-third included chemical, hematological, or immunological studies. Profiles of postmortem findings of single drug cases were drawn for the primary single drug types (such as barbiturates or narcotics) and found not to differ markedly from those involving more than one drug or drug(s) in combination with alcohol. Acute pulmonary edema was common in all drug groups and is presumably a nonspecific end-stage finding of congestive heart failure and death from overdose. The toxicological examinations differed considerably among the nine cities. There was a range of 1.6 to 3.5 drugs reported as tested. Overall, the proportion of drugs quantitated was about 75 percent.

For most drugs the amount present in combination with alcohol was considerably lower than amounts of the same drugs when alone; this finding was dramatic confirmation of synergistic effects.

The social and demographic characteristics of these cases are of considerable interest. Looking only at the drug-induced (i.e., caused-by-drug) cases, there were discernible differences by type of drug. The narcotic death cases were generally younger than the non-narcotic cases and more often involved unmarried persons, males, and blacks. (Los Angeles was an exception, where white cases predominated.) In all drug categories, the majority of individuals were employed, a surprising finding.

Mode of death, where it was known, was an important variable in the study, since it allowed distinctions to be made between users of drugs for social, recreational, or other nonmedical purposes ("drug abuse") and those who used drugs for the final act of suicide. There is concern over suicides, of course, but the former type of drug abuse has created more anxiety, debate, and involvement of resources over the past few years. Thus, it was important to look at the major modes separately to see how they differed and what could be learned from them about drug abuse deaths.

The mode labeled "accidental" covered what are commonly referred to as drug abuse cases, though it also included the few cases of therapeutic misadventure that might come to the medical examiner's attention. Unfortunately, such large numbers of cases were classified as "unknown" as to mode of death in New York and Philadelphia that they were not tabulated for sociodemographic or other characteristics. (This was one of several instances in which the procedural or other differences among medical examiners' offices made generalizations difficult, if not impossible.) No typical profile of accidental death could be discerned, but one or two trends were observed. Most cases were in the young adult age category and males outnumbered fe-

males; whites outnumbered blacks except in Washington, D.C. Among the leading five types of drugs involved, narcotics accounted for more than the others, but the percentages reported varied widely by city.

In contrast to accidental deaths, the cases labeled "definitely suicide" involved more females than males and the victims were somewhat older than the cases as a whole. Whites were overrepresented among suicides compared with blacks. Barbiturates were the most commonly used drug type for suicide in all nine cities and alcohol was present in about one-fourth of the cases.

Homicide made up about one-tenth of the total number of drug-involved deaths; most were coincidental with some other physical event, such as shooting.

CONCLUSIONS

Implications of these findings are discussed from three viewpoints: the drug abuse problem itself; the quality of information emanating from medical examiners' offices; and the feasibility of future epidemiological research.

It is obvious that opiates and barbiturates were the most problematic drugs; the extent to which this results from the availability of the substances themselves is open to debate. Young adults who were in otherwise normal physical condition were frequent victims. Accidental death (mainly "overdose") was the most frequent mode and suicide the second most frequent. The large number of cases classified "unknown" as to mode is an obstacle to full knowledge of these deaths.

There are several laudable practices carried on across the board in the nine cities: on-site investigations, conduct of postmortem examinations by qualified pathologists, and the use of toxicological laboratories as the preferred source of information. The results of the concurrent toxicology proficiency study and certain other data, however, create doubts about the reliability of either attribution or lack of attribution of death to specific drugs. With polydrug use increasing, this problem may become worse rather than better.

Local autonomy and responsibility for functions other than epidemiology seem to stand in the way of obtaining consistent, reliable information that can be compiled into a national picture. Unless or until this condition changes, further studies are not likely to make the picture of drug abuse deaths much clearer.

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Chapter 2

Methods of Study

Liike the purposes of the study, the methods used in it evolved over the five-year course of the project. What began as an instrument feasibility study grew into an epidemiological investigation of its own--both designed to "piggyback" on the established system of mortality data collection. Because of the unanticipated difficulties encountered in this "piggybacking," a third stage of the study--evaluation of the method--became a necessary consideration. This evaluative stage was never a formal intention of the study, and only in retrospect can it be considered an investigation of the comparability of methods among medical examiners in major cities. Decisions made early in the feasibility stage could not be remade in the epidemiological and evaluative stages. Thus, some results are not ideal from the sampling or analysis viewpoints but form the basis of some valuable conclusions about the nature of the process of "piggybacking" on established data collection systems.

The primary objectives, as noted in the first chapter, were to develop a reporting form capable of collecting comprehensive information on deaths involving psychoactive drugs; to test the form by collecting data in the offices of medical examiners or coroners in selected cities; and to describe the characteristics of drug-involved deaths in major cities, as well as the procedures for reporting them. Methods for development of the reporting form, selection of cases, data collection, and analysis of data had to be devised to carry out the purposes of the study.

DEVELOPMENT OF THE REPORTING FORM

Mortality statistics ordinarily rest on the information gathered from the death certificate, a relatively standard instrument familiar to the general public. The death certificate concentrates on information about the identity of the deceased, the place, date, and cause of death, and details about burial. The brief section on cause of death asks only the immediate and contributory causes, and whether the death was accidental, a suicide, a homicide, or undetermined as to mode. This study needed additional items of specifically medical interest available from medical examiners' files, such as toxicological findings, types of drugs in evidence, and postmortem findings. Also, it was important to categorize drug-

involved deaths in such a way as to distinguish drug abuse cases from other types.

The form went through several revisions before the first wide-scale data collection. The items in the earliest version resulted from systematic inquiries of a variety of sources: coroners and medical examiners; vital statistics offices; medical departments of pathology, toxicology, and pharmacology; the Bureau of Mortality Statistics, U.S. Department of Health, Education, and Welfare; and several forensic pathology departments in Europe. In addition, site visits were made to more than twenty medical examiners' or coroners' offices throughout the United States and Europe to learn what information they deemed important.

Although the form has seven parts, the information requested may be classified into three general areas: characteristics of the deceased, circumstances surrounding the death, and the process of investigating the death.

"Characteristics of the deceased" includes not only the obvious demographic variables (covered primarily in Part I), but also background variables, such as whether the decedent had a history of mental illness (in Part VI), and details of the deceased's early home life, and drinking and smoking habits (in Part VII).

"Circumstances of the death" includes items regarding the drug or combination of drugs used, causal relationship between the drug and the death, source of the drug, mode of ingestion (all these in Part I), and treatment of the deceased prior to death (Part V).

"The process of investigating the death" includes items regarding the on-site investigation (Part II), the toxicological examination (Part III), and the autopsy (Part IV), questions designed to make the decision-making process accessible and thereby facilitate evaluation of the adequacy of postmortem procedures.

The entire document was tested by the research team in a pilot study of 300 cases of psychoactive drug-involved deaths in three representative cities in the United States. Minor changes were made and the resulting form was the one used in collecting the data of Survey 1. This revised form, entitled "Report of a Drug-Involved Death,*' is reproduced in Appendix A together with several necessary code sheets (pages 118-131). The most important of these, Code Sheet #3, appears below. It includes the major distinctions critical to the analysis of drug-related deaths, most importantly the differentiation of drug-induced from drug-related deaths.

After Survey 1, the form was again revised. There were six changes of note: It was requested in Part I that drugs be ranked in order of importance to eliminate ties; also, more than one source of information identifying the drug was allowed. In Part II events surrounding the death were covered, as well as on-site investigations. Information about drug screens was asked for every drug listed in Part III. Part V allowed medications given for reasons other than

Role of Drug Involved in Death

A SCHEMA FOR DEFINING AND CATEGORIZING
DRUG-INVOLVED DEATHS

Survey 1

DRUG-INDUCED

A.   Simple or direct -- the drug in question was specifically the cause of death with no other agent playing a significant role.
     01.   Accidental or "unexpected"
     02.   Suicidal
     03.   Homicidal
     04.   Unknown

B.   Drug in combination with some other potentiating or synergistic pharmacologic agent, such as alcohol, barbiturates, etc.
     05.   Accidental or "unexpected"
     06.   Suicidal
     07.   Homicidal
     08.   Unknown

C.   Idiosyncratic -- an unexpected effect, such as an anaphylactic or immune reaction.
     09.   Accidental or "unexpected"

DRUG-RELATED

D.   Drug in combination with some pre-existing and potentially deadly physiological condition, such as diabetes, chronic heart condition, etc.
     10.   Accidental or "unexpected"
     11.   Suicidal
     12.   Homicidal
     13.   Unknown

E.   Drug in combination with some physical event outside of the patient's body, such as death by vehicle or gunfire while under the influence, etc.
     14.   Accidental or "unexpected"
     15.   Suicidal
     16.   Homicidal
     17.   Unknown

F.   Drug in combination with some medical disorder or disease probably produced by drug abuse, such as hepatitis, bacterial endocarditis, tetanus, etc.
     18.   Accidental or "unexpected"
     19.   Unknown

overdose to be listed, and a question on the mental state of the deceased was added to Part VI. The final version of the revised form used in Survey 2 is reprinted in Appendix A.

SELECTION OF CASES

The participating medical examiners and coroners in nine cities were asked to select cases to be reported that would conform to the categories of the Code #3 schema, with the qualification that cases involving ethanol without other psychoactive drugs were to be excluded. The definition of "psychoactive" was left to the discretion of the persons who selected the cases. For Survey 1 (2000 cases selected over the period of 1972-1974) the medical examiners and coroners were allowed to devise their own selection procedure to obtain representativeness as best they could. This seemed necessary because each city had a different system of filing cases and the often severe problems of locating cases also differed. For Survey 2 (1000 cases selected in 1975) certain restrictions were added to gain comparability between cities as to the time period sampled.

The sampling quotas for Surveys 1 and 2 differed. For Survey 1 each city was given a total number of cases to be submitted. Because the emphasis was on the development of the reporting form itself, the time periods sampled were not comparable from city to city, nor was the sampling evenly spread out over time. In an attempt to obtain more chronologically equivalent samples, in Survey 2 each of the six largest cities was asked to submit the first portion of the quota of eligible cases that occurred each month (the portion differed from city to city) and each of the three smallest cities was asked to submit all the eligible cases that occurred in the eight-month period.

Survey 1 Quotas. The research team assigned a quota to each city based roughly on its population and on an estimate of its drug problem, because there were no other bases for estimating how many cases one could reasonably expect from each city. These quotas were modified, however, so that the small cities had proportionally larger quotas, in order to provide sufficient numbers of cases for analysis. The initial and final quotas for Survey 1 are shown in table 2.01. Because of difficulty encountered by the investigators in carrying out the task, fifty of Dallas' quota of cases were transferred to San Francisco. Difficulties were also encountered in maintaining a consistent time period for all offices, but deviations were tolerated in order to complete quotas. The distribution of dates of discovery of the Survey 1 deaths by city is seen in table 2.02.

Survey 2 Quotas. Six of the nine cities received letters that included the following paragraph:
"Your city has a quota of (N) cases whose dates of discovery are to fall between 1 January and 31 August 1975. Select the cases in the following manner: For each calendar month, take the first (n) cases, in order of discovery, that fulfill our criteria for a drug-involved death. Please make sure that no other criterion is used for selection. Let us know if you have difficulty in implementing this procedure."

TABLE 2.01

Quotas for Number of Cases To Be Collected
From Each City (Survey 1, N=2000)

City:	Number of cases	
	Initial quota	Final quota
Chicago	300	295
Cleveland	150	150
Dallas	150	100
Los Angeles	300	300
Miami	150	151
New York City	400	405
Philadelphia	200	199
San Francisco	200	250
Washington, D.C.	150	150

TABLE 2.02

Drug-Involved Deaths by Year and Quarter
of Discovery (Survey 1, N=2000)

Year & Quarter	Percent of Cases								
	Chic- ago %	Cleve- land %	Dal- las %	Los Ang. %	Mi- ami %	New York %	Phila. %	San Fran. %	Wash. D.C. %
1972									
1st Q.							24.6		
2nd Q.									
3rd Q.									18.0
4th Q.									15.3
1973									
1st Q.	15.9		1.0		14.6	1.5	24.1	20.8	18.0
2nd Q.	16.6	12.0	15.0		8.6	22.0	25.6	20.0	8.7
3rd Q.	37.6	18.0	12.0	1.3	13.2	10.1	25.6	13.6	14.0
4th Q.	29.8	28.0	21.0	36.3	13.9	17.5		18.4	10.7
1974									
1st Q.		5.3	25.0	45.7	12.6	30.6		14.0	6.0
2nd Q.		20.0	16.0	16.7	17.2	15.6		13.2	9.3
3rd Q.		12.0	10.0		17.2	2.0			
4th Q.		4.7			2.6	0.7			
Total[a]	99.9	100.0	100.0	100.0	99.9	100.0	99.9	100.0	100.0
Number	(295)	(150)	(100)	(300)	(151)	(405)	(199)	(250)	(150)

[a]Because of rounding, some percentages do not add to precisely 100.0%.

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TABLE 2.03

Quotas for Number of Cases to Be Collected
From Each City (Survey 2, N=1004)

| | Number of cases | |
City	Quota selected monthly 1 Jan thru 31 Aug 1975	Total Number
Chicago	First 16 cases	128
Cleveland	All cases	69
Dallas	All cases	61
Los Angeles	First 18 cases	144
Miami	First 10 cases	80
New York City	First 30 cases	240
Philadelphia	First 13 cases	103[a]
San Francisco	First 13 cases	104
Washington, D.C.	All cases	75

[a]Because, in one month, Philadelphia had a total of only 12
 eligible cases, this count is one short of the planned quota.

The three remaining cities, Cleveland, Dallas, and Washington, were
requested to submit all eligible cases discovered during the specified
eight months. Quotas for the larger cities were set in proportion
to their caseload; for the smaller cities, the number was set some-
what higher to improve reliability of the resultant statistics. The
quotas and resulting numbers of cases are found in table 2.03.

As epidemiological purposes began to dominate the study, the con-
cern for representativeness became more serious. Since the initial
decision was to cooperate with the medical examiners' and coroners'
offices for data collection, rather than to have data collected by
project personnel, the outcome of sampling procedures rested pri-
marily on the ability of the investigators to communicate their
intentions and on the ability of the offices to comply. Because
of this, no strong claims can be made for generalizability of those
findings to a hypothetical universe of psychoactive drug-involved
deaths in those cities. But with the exceptions noted below, the
results are judged to be a fair representation of each office's per-
ception of such cases in its city.

The cases taken from nine urban areas obviously cannot be generalized
to rural areas. Moreover, the nine areas, not having been selected
at random, cannot be considered representative of urban United States.
Finally, since cases are taken from the files of medical examiners
and coroners they inevitably will not include cases that escaped
their attention.

Some types of cases that may escape the attention of coroners and
medical examiners are, for example, the case of a patient who died
in a hospital from hepatitis caused by an unsterile hypodermic needle

used to inject heroin, or the case of a chronically ill person who committed suicide by taking an overdose of pain-killer, but whose death was attributed to the illness. Another type of case that might not escape attention but still escape identification [at least positive identification) as being due to a psychoactive drug is exemplified by a person killed in an accident caused by his own or someone else's impairment of brain function by such a drug. Finally, to complicate matters even further, there are probably consistent differences from city to city, both in ability to recognize cases as being drug-involved and in readiness to classify borderline cases as being drug-involved.

For all these reasons, the generalizability of these data is severely limited. The best that can be said is that they indicate the hypothetical population of drug-related deaths in the nine cities, and even that level of generalizability is further limited to the universe of deaths potentially identifiable from medical examiners' and coroners' records, according to the standards of evidence in each city. The data from all nine cities are useful for purposes of comparison of decedents' characteristics over time, within and among the cities. To use the data to generalize to other cities or to the nation as a whole would be unjustified, but they can generate tenable hypotheses for future study.

After Survey 1 was completed, questions about representativeness of data from each city were dealt with by an ad hoc inquiry in each office. The inquiry proceeded as follows:
(1) A questionnaire on sampling procedures was filled out by all coroners' or medical examiners' offices.
(2) A tally was made of all drug-involved deaths processed in the years sampled in five cities (Cleveland, New York, Philadelphia, San Francisco, and Washington, D.C.) for the years in which that total was in doubt. The form collected information on the major demographic variables (age, sex, race, marital status), drug(s), and on the role of the psychoactive drug(s) as a cause of death, as well as on the date of death and identifying case number.
(3) Official lists of deaths were supplied by three cities (Chicago, Miami, and Los Angeles).
(4) Discrepancies between the original data and those collected from the tally on particular questions were examined for individual cities.
(5) Analysis was made on distribution of dates of discovery of the deaths.
(6) Analysis was made of distribution of cases according to role of the drug and the mode of death.

On the basis of this inquiry, the following judgments of representativeness were made for Survey 1 for the nine cities:

1. <u>Chicago:</u> Probably representative of 1973; sample contains at least 85 percent of eligible cases.
2. <u>Cleveland:</u> Probably representative of 1973 and perhaps of 1974; sample contains 90 percent of eligible cases in 1973 and 70 percent in 1974.
3. <u>Dallas:</u> Probably close to a complete count of accidental

(overdose) cases; other types of cases may not be as well represented.

4. <u>Los Angeles:</u> Accidental (overdose) cases overrepresented; 1973-1974 thoroughly covered.

5. <u>Miami:</u> Probably representative of 1973-1974.

6. <u>New York:</u> There were discrepancies in types of cases between the survey sample and other distributions! leaving representativeness in doubt. A large proportion classified unknown as to mode [intention) made the analvsis difficult.

7. <u>Philadelphia:</u> A difference in definition of drug-related deaths (exclusion of suicide cases who had not used drugs previously) affects'representativeness compared with other cities; other-wise, the sample is probably representative of Philadelphia's cases during the Survey 1 period.

8. <u>San Francisco:</u> Probably representative of 1973-1974.

9. <u>Washington, D.C.:</u> Probably representative of 1973-1974.

A potential source of bias of general concern is that cities used cases drawn from toxicological records rather than from the general files. If taken only from toxicological records, it is conceivable that drug-involved cases with negative or threshold toxicological evidence might have been omitted. Moreover, such cases may be more common for some roles of a drug in death than for others. The cities which stated that they did not restrict their research to toxicological records were Cleveland, Los Angeles, and Philadelphia.

Representativeness of Survey 2 was assessed after the fact by interviewing the personnel by telephone. Only in Los Angeles was there a possibility of discrepancy between sample and universe, created by a difference in definition: Los Angeles included in its sample only cases whose primary cause of death was attributed to a drug.

As a result of these investigations, representativeness of Survey 1, in particular, must remain tentative. The task of obtaining these samples from separate medical examiners' or coroners' offices was instructive in its own right and useful conclusions can be drawn from it.

COLLECTION OF DATA

For both surveys, the method of collecting data was to recruit one or more persons in each of the nine cities to select the cases and fill out the forms, paying $20 per completed form. When more than one person collaborated, usually one was a qualified individual who selected cases and handled any difficulties of interpretation, while the other transferred the information from the case files to the reporting form. The problem of inducing members of the staff of the coroner's or medical examiner's office to participate in this project turned out to be unexpectedly difficult in several cities. Filling out the form was a time-consuming task, and often no one was found who could spare the time, even with the incentive of $20 per case. Therefore, outsiders sometimes had to be recruited and made familiar with the reporting form and the office's system.

Whether insiders or outsiders finally took on the job, long delays occurred in some cities before any reporting forms began to be re-

turned, and often further delays occurred during which the forms ceased to come in. Turnover in personnel in some cities sometimes left the project abandoned for several weeks. Although certainly not ideal from the standpoint of scientific rigor, these difficulties are nonetheless unavoidable in using a system established for other purposes.

ANALYSIS OF DATA

Most portions of the reporting form were preceded, but certain areas required coding after data collection. Code Sheet #3, classifying the role of drug and mode of death, has been discussed. The code for drug classification was the same as that developed by LEA, Inc., of Ambler, Pa., for the initial DAWN reporting. It grouped drugs according to the following attributes: (1) the principal therapeutic action of the drug; (2) the chemical or pharmacological nature of the drug; (3) the classification desired by the client or manufacturer; and (4) the U.S. Food and Drug Administration's approved usage of the drug. For purposes of analysis, the classification was re-organized, combining the classes into ten categories: narcotics, analgesics, barbiturates, sedatives, tranquilizers, marijuana and psychedelics, psychostimulants, antidepressants, ethanol, and miscellaneous . The "miscellaneous" category included those drugs that were rarely mentioned and did not fit into other well-populated categories. One exception to the aforesaid rule was quinine, which, although it was often mentioned (being a common diluent of heroin), was still classified under "miscellaneous." A category for marijuana and psychedelics was included because of potential interest, but it was so rarely used that it might have been better to include those drugs in the miscellaneous category. Appendix B lists the names of the drugs which were entered in the various parts of the reporting form and is a source of examples of the types of drugs that were classified under each of the ten categories.

The analysis covered the areas of inquiry of most practical interest to the sponsoring agency: distribution of drug types and mode of death; characteristics of accidental, suicidal, and homicidal deaths; and details of the toxicological, on-site, and off-site examinations. The small numbers in some cells of some tabulations precluded more sophisticated analysis or even the computation of percentages that could be compared across all cities.* A multivariate analysis might have answered the question of how important certain factors were in explaining the modes of death, but the data were not amenable to it. It is hoped that visual inspection of the tabulations will sufficiently illuminate the issues. The data tapes have been deposited in the Drug Abuse Epidemiology Data Center at Texas Christian University for secondary analysis by interested scholars.

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* To avoid misleading comparisons, percentages were not reported on any cells totaling less than 20. (Editor)

METHODOLOGICAL AFTERWORD

A good form on which to record a comprehensive range of information germane to psychoactive drug-involved deaths does not suffice to obtain fully reliable information. Many kinds of errors occur in trying to obtain data from any source with any reporting form. The investigators tried to keep these errors to a minimum in a number of ways. They personally examined the case records available in the medical examiners' offices for completeness and relevance; they worked with individuals at the coroners' offices to fill out portions of the form and spot-check for errors in recording. When appropriate, they collected and recorded the data personally instead of delegating the responsibility to other individuals. Finally, the completed forms were checked by computer, and a number of computer programs were written and used to detect errors, omissions, and inconsistencies. Nonetheless, the kinds of errors encountered despite these precautions serve as a map of possible pitfalls.

I. Errors in the sampling process to achieve representativeness:

A. Selection by the medical examiner or coroner Of Cases from files according to preconceptions about the distribution of the kinds of cases.

B. Time sampling errors from the annual pool of cases, either unsystematic (irregular annual sampling over only a few months) or systematic (regular sampling over the same few months).

C. Lack of chronological listing of all cases processed by a jurisdiction, and haphazard use of various other lists of deaths by Poison, suicides, homicides, accidents, and so forth.

II. Errors or inadequacies in the source of information:

A. Errors in recording relevant details in the coroners' files.

B. Omissions or other incomplete data in these files.

C. Delegation of data collection to uninformed or untrained personnel.

D. Errors intrinsic in the data itself, e.g., in the postmortem, toxicological assessments, certification of cause of death, and so forth.

We hope that others in the future, faced with a similar task of assessing a new social problem within the limits of a preexistent data collection system, may find our experiences useful.

General Description of Cases

SUMMARY

By making certain restrictions on the cases and the descriptive variables considered, data for all or most of the nine cities were sufficiently comparable to warrant combining them. To attain comparability in the types of cases included, they were restricted to those for which a drug or combination of drugs was the direct cause of death (Categories A and B on Code #3), herein referred to briefly as "overdose deaths." To attain comparability in Survey 1 cases, several extra restrictions had to be imposed. The analyses performed on the data from the Survey 1 time period had to be restricted to the descriptive variables found on the tally form used in the ad hoc inquiry that followed Survey 1 (see page 13): sex, age, race, marital status, drugs involved, and mode of death. The same tactic also allowed the inclusion of cases from tallies of Cleveland and San Francisco that supplemented their cases on the reporting form. Additional restrictions were necessary to attain comparability of sampling period for Survey 1 cases.

Before combining the data from the various cities, each city's results were weighted to represent the estimated number of overdose deaths that had been processed by the medical examiner or coroner of the city during each of three time periods.

The variables that appear on the tally form were examined and compared for the three time periods. Males outnumbered females, and accidental deaths were more numerous than suicides, except for the "unknowns." A trend was apparent in two variables, sex and type of drug involved. The percentage of males increased from 58 to 68 percent from the first to the third period, and the percentage of cases involving narcotics increased from 41 to 55 percent, while the percentage of cases involving barbiturates or both barbiturates and narcotics decreased.

COMBINED GENERAL DESCRIPTION OF CASES FOR ALL NINE CITIES

The chapters which follow will analyze the results of Surveys 1 and 2 for separate cities. There are good reasons for this

strategy: each city's drug-involved death population may have unique characteristics, and/or each city's medical examiner or coroner may have a somewhat different conception as to what constitutes a drug-involved death. Nevertheless, there is value in looking at the combined data from the nine cities. Although they do not encompass the entire United States, the nine selected cities do include some of its most populous areas, many of which are meccas for drug abusers or are places where illicit drugs are more available than in other parts of the country. Therefore, results based on all of the cities can be considered a rough reflection of urban United States.

Creation of Data Sets Combining Cases from the Nine Cities

In order to combine the data of the nine cities into a meaningful set, the cases had to be reasonably comparable as to type and time of occurrence.

Not all types of cases could be included in the combined set, since there were substantial differences from city to city in the types of cases deemed drug-involved (see chapter 2). The solution to this problem was to include in the combined set only those cases of drug-induced deaths for which the role of the drug was direct and not those in which the drug was merely a contributory cause of death. It is the latter type of case on which those cities' attitudes seemed to differ most. Moreover, for **most** cities, the drug-induced cases made up the great majority of the samples.

One difficulty with the above solution was that Philadelphia differed substantially from the other cities in Survey 1, even in its definition of an overdose death. It was therefore considered necessary to exclude all Philadelphia's Survey 1 cases from the combined set. Another difficulty was that New York City's method of selection in Survey 1 seemed to be one which would not lead to a representative sample even of overdose deaths. Since the contribution of New York to a combined set of data for all the cities was so large, it was not practical to exclude New York cases. The solution to this problem took advantage of the fact that an exhaustive census of drug-involved death cases was obtained from New York on the tally form. If the analyses to be performed on the combined Survey 1 cases were restricted to those variables that appeared on the tally form, then cases of overdose deaths that were available on that form could also be used in making up a combined set. Thus it was decided that: (1) New York City's contribution to the combined set of cases for the time periods of Survey 1 would be taken exclusively from the tally cases; (2) the other cities' contributions would be taken from the Survey 1 cases but consist only of those variables found also on the tally form; and (3) Cleveland's and San Francisco's Survey 1 contributions would be supplemented by the cases they added with the tally. (Washington, D.C.'s tally form cases were not considered suitable for inclusion.) There was no reason for the Survey 2 combined set to be restricted to the tally form

variables, but these variables can be singled out in that set for comparison with earlier data.

Another requirement for comparability was that the cases to be combined must have occurred during the same period of time. Although this was true for Survey 2 cases, inspection of table 2.02 indicates that it was not true for Survey 1 cases.   To solve this problem, from the entire span of time covered by Survey 1, two periods were selected that had good representation from most cities, and two separate combinations were made for the cases that occurred in each time period. The two time periods for Survey 1 were July through December 1973 and January through June 1974.   The Survey 1 cases that did not occur during either of these time periods were ignored and do not contribute to any of the analyses of the combined data reported here.   It should be noted that Chicago did not contribute any cases occurring during 1974, and therefore it is not represented in the second combined set.   (It was because of Chicago's absence from the 1974 data that Survey 1 was divided into the two time periods described, which are analyzed separately in this chapter.) Philadelphia, as mentioned earlier, is not represented in either of the two Survey 1 combined sets.

In summation, three sets of cases were created that combined cases from the cities.   The first set covered the last six months of 1973, the second covered the first six months of 1974, and the third covered the first eight months of 1975. All three sets included only cases of overdose deaths, The first two sets did not include any cases from Philadelphia, and the second set did not include any cases from Chicago.   The first two sets included cases available from the tally as well as from Survey 1, and therefore allowed analysis only of variables that appear on the tally form.   The third set included all cities and allowed analysis of all variables found on the reporting form.

Weighting of the Cases

Before analyzing the combined sets of cases, each city's contribution had to be weighted by taking its sampling fraction into account.   That is, each city's contribution to the combined sets was made proportional to the total number of overdose cases that occurred in that city during the sampled period. This was accomplished by multiplying each city's contribution by the ratio of the number of cases in the total population to the number of cases in the sample.

The problem then arose of estimating the total number of overdose deaths that were processed in each of the nine coroners' or medical examiners' offices during each of the three time periods to be analyzed.   For the third set, which consists of Survey 2, it was comparatively easy to do this.   For Survey 2 the total number of drug-involved deaths during the eight months sampled in 1975 was reported by each city.   We assume that the proportion of overdose deaths to total drug-involved deaths found in the cases

TABLE 3.01

Estimated Actual Cases and Survey Cases
of Overdose Deaths[a] for Three Time Periods, in Nine Cities

City	June-December 1973 (6 months, Survey 1)		July-December 1974 (6 months, Survey 1)		January-August 1975 (8 months, Survey 2)	
	Estimated Actual Cases	Survey Cases	Estimated Actual Cases	Survey Cases	Estimated Actual Cases	Survey Cases
Chicago	160	126	c	c	289	81
Cleveland	63	63	43	43	62	62
Dallas	33	33	33	33	53	53
Los Angeles	472	93	508	145	799	142
Miami	63	39	91	43	132	67
New York	721	721	623	623	1017	204
Philadelphia	b	b	b	b	124	79
San Francisco	87	71	96	96	139	88
Washington, D.C.	28	20	24	11	43	43

[a] Overdose deaths defined as deaths caused by direct action of drug(s). Categories A and B in Schedule 2.01, Code #3.

[b] Cases excluded from this analysis because of definitional problem.

[c] No cases contributed to survey in this segment of reporting time.

for which reporting forms were filled out is a good approximation to the proportion that occurs in all the cases. For example, if city X claims that 400 eligible cases occurred in the eight months and we find that 80 of the 100 cases for which we have a report were overdose cases, then we can estimate that 80 percent of the 400 (320 cases) were overdose cases. Therefore, in the combined sample, each of this city's 80 cases would count as four to contribute 320 cases to the total number. We did not need to estimate for the three cities that contributed 100 percent of their eligible cases to Survey 2.

Estimating the total number of overdose cases that occurred in each city during the time periods covered by the two Survey 1 sets (the last six months of 1973 and the first six months of 1974) required a bit of speculative reasoning for most cities. The exceptions are New York and Cleveland for both time periods and San Francisco for the second period. For these cities for which we have the tally data, all cases are included in the two sets. The estimates for the other cities were derived from tabular and other materials received from the offices in those cities. Table 3.01 presents the estimates of numbers of overdose cases for each city for the six-month periods analyzed in 1973 and 1974 and for the eight-month period of Survey 2 in 1975.

Findings of the Combined Sets

Table 3.02 presents some summary findings on the variables available in the tally form for the three sets of combined cases. The findings must be approached cautiously because of the tentative way in which cases in some of the cities were weighted in the first two periods. Furthermore, because the 1974 period has no contribution from Chicago and neither the 1973 nor the 1974 period has any contribution from Philadelphia, differences between periods may reflect the changing composition of the samples rather than any total trend. One is struck, nevertheless, by the remarkable consistencies, rather than by the differences, across time periods.

The largest category in modes of death was "unknown," but among the rest, accidental deaths outnumbered suicides, and homicides were nearly absent. Average age of the decedents was about 32 years. Opiates outnumbered barbiturates (in single drugs involved) by about two to one. Males outnumbered females, though not by a large margin.

The proportion of males showed a small increase between the earlier period and the later ones. It is hard to attribute this trend to the changing composition of the sample; that is, the proportion of male overdose deaths in the excluded city, Chicago, itself increased from 65 percent in 1973 to 75 percent in 1975. The elimination of Chicago from the 1974 sample should, if anything, cause the male proportion to decrease in that year, It is also difficult to attribute the increase in the 1975 male proportion to the inclusion of Philadelphia in that year, The male proportion of that city's overdose deaths in 1975, 66 percent, was below the average proportion of 68 percent for the combined sample. Perhaps future analyses will be able to answer the question of whether the trend was real or a sampling artifact,

Another tendency apparent in table 3.02 is for cases in which opiates were involved to increase at the expense of barbiturate cases and cases involving both barbiturates and opiates. This may be related to the previously mentioned increase in male cases.

The combined group of Survey 2 overdose death cases can be inspected on all the variables of the reporting form, not only on those of the tally form. Therefore, table 3.03 presents summaries of some other selected demographic and biographic variables to help characterize the nature of that sample.

One small finding that stood out was the proportion of decedents who lived alone -- 26 percent, Another was that only 22 percent were unemployed. Because of the rather large amount of information "unknown" about these cases, firm conclusions are not easy to draw.

TABLE 3.02

Major Demographic Characteristics of Weighted
Combined Overdose[a] Cases for Three Time Periods

	Survey 1		Survey 2
	June-December, 1973	July-December, 1974	January-August, 1975
Mean age in years	32.5	32.3	32.7
Sex:			
Male	58 %	63 %	68 %
Female	42	37	32
Race/ethnicity:			
White	55 %	51 %	56 %
Black	34	32	33
Hispanic	9	13	11
Other	1	4	0+
Unknown	1	0+	0
Marital status:			
Never married	43 %	42 %	48 %
Married	28	27	27
Separated	3	2	4
Divorced	11	12	11
Widowed	4	4	5
Unknown	10	13	6
Drug type involved:			
Opiates	41 %	48 %	55 %
Barbiturates	27	21	21
Both	13	10	5
Neither	19	21	19
Mode of death:			
Accident	36 %	37 %	34 %
Suicide	25	24	29
Homicide	0+	0+	0+
Unknown	38	39	37

a
 Overdose cases defined as deaths caused by direct action of
 drug(s), Categories A and B in Schedule 2.01, Code #3.

TABLE 3.03

Selected Characteristics of Weighted Combined Overdose[a] Cases

Employment Status:

Full-time	29 %
Part-time	2
Unemployed	22
Student	5
Housewife	11
Pre-school	0+
Retired	3
Unknown	28
	100 %

Occupational Status:

Professional	3%
Semiprofessional	5
Skilled	12
Semi-skilled	18
Unskilled	16
Student	5
Housewife	12
Never employed	8
Unknown	22
	101% [b]

Recent Living Arrangements:

With both parents	8 %
With mother	6
With father	0+
With spouse	18
With other member of opposite sex	8.
With relative	6
With friend	4
Alone	26
Other	5
Unknown	17
	98 % [b]

Military Service:

Had served	10%
Never served	59
Unknown	31
	100%

History of Enrollment in Drug Rehabilitation/Treatment Programs:

At least once	5%
Never	46
Unknown	48
	99% [b]

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[a] Overdose cases defined as deaths caused by direct action of drug(s), Categories A and B in Schedule 2.01, Code #3.

[b] Adds to more or less than 100% because of rounding.

Chapter 4

Role of Drugs in Death

SUMMARY

The role of the drug in death can be reliably classified by coroners and medical examiners according to a schema that differentiates whether the death was <u>directly</u> <u>induced</u> or merely <u>drug-related,</u> and by <u>mode</u> of death.

To illustrate the variety of drug roles involved in these deaths, in Survey 1 (1972-1974), a single psychoactive drug was the specific cause of death in 41 percent of the 2000 cases, and a combination of drugs was responsible in 34 percent. A preexisting and potentially fatal physiological disorder in combination with the drug(s) resulted in the death in 7 percent of the cases; and death resulted from a combination of the drug effects and physical events outside of the person's body (for example, an auto accident) in 15 percent.

In the two surveys there were differing patterns across cities of the roles of the drug(s) in death. Also, except for Chicago, there were somewhat different distributions of the roles of drugs within each city from one time period to the other.

ROLE OF DRUGS IN DEATH

The role of the drug involved in the death was classified according to the nineteen categories in Code #3, "A Schema for Defining and Categorizing Drug-Involved Deaths" (page 9). The classification involves two dimensions: (1) directness of the drug's action, ranging from simple or direct cause of death to drug in combination with a physical event outside the patient's body; and (2) mode of death, ranging from accidental to homicidal, and including "unknown." All of the coroners' and medical examiners' offices participating in the study said that this classification could be quite reliably carried out by their offices.

Of the Survey 1 cases, the following categories of the role of

drugs in death constitute the major portion of the causes:

- In 41 percent of cases the drug was the specific cause of death, with no other agent or condition playing a significant role.

- In 34 percent of cases the drug led to a lethal outcome by combining with some other pharmacologic agent such as alcohol or a barbiturate.

- In 10 percent of cases the drug caused death by combining with some preexisting and potentially fatal physiological condition such as diabetes or chronic heart disease (7 percent) or drug abuse condition (3 percent).

- In 15 percent of cases the drug led to fatal results through a combination of physical events outside the patient's body, such as death by vehicle or gunfire while under the influence of the drug.

Table 4.01 gives these findings in fuller detail.

Table 4.02 gives the results by role of drug (and mode) in Survey 2, which took place about two years later. It is interesting to observe that overall patterns changed with time. They also changed in some of the nine cities. The proportion of "drug-induced" deaths was smaller in the earlier survey, and "drug-related" cases were less frequent in the later one. It is possible that drug consumption patterns, treatment and rehabilitation programs, intervention in the criminal justice system, and preventive measures influenced these patterns. It is even possible that differences in sampling cases over time contributed to the variations (see chapter 2).

ROLE OF DRUGS IN DEATH, BY CITY

The following differences appeared in individual cities when data from Surveys 1 and 2 were compared (see tables 4.01 and 4.02).

Chicago: The distribution of roles of drugs in death was similar in 1973 and 1975.

Cleveland: Single-drug suicides were considerably more frequent in the first survey than the second, and polydrug-induced accidents were more frequent in the second.

Dallas: There were more single-drug-induced suicides in the first survey, but more polydrug-induced suicides in the second. There were also fairly high proportions of unknowns in both surveys.

Los Angeles: Single-drug-induced accidents went down, but polydrug suicides went up from the earlier to the later survey.

Miami: There was a higher incidence of accidental deaths and

TABLE 4.01

Role of Drug in Death Cases, by City (Survey 1, N=2000).

Role of Drug in Death:	Chi-ago %	Cleve-land %	Dal-las %	Los Ang. %	Mi-ami %	New York %	Phila. %	San Fran. %	Wash. D.C. %	All Cities %	No.
Drug-induced											
Single drug:											
Accident	17.6	23.3	15.0	28.3	21.2	--	0.5	21.2	30.0	15.8	(318)
Suicide	4.4	34.7	39.0	11.0	43.7	1.0	7.5	24.4	20.0	15.7	(313)
Homicide	0.3	0.7	--	--	--	0.2	--	--	--	0.2	(3)
Unknown	3.1	0.7	21.0	0.7	0.7	16.1	36.2	5.6	0.7	9.2	(186)
Subtotal	25.4	59.4	75.0	40.0	65.6	17.3	44.2	51.2	50.7	40.9	(820)
Polydrug:											
Accident	30.2	21.3	4.0	31.3	8.6	0.2	--	18.8	6.0	14.5	(289)
Suicide	4.4	4.7	5.0	7.3	15.2	5.7	--	16.8	2.7	7.0	(139)
Homicide	0.7	--	--	--	--	--	--	--	--	0.1	(2)
Unknown	2.0	--	2.0	0.7	--	58.1	2.0	2.0	0.7	12.7	(254)
Subtotal	37.3	26.0	11.0	39.3	23.8	64.0	2.0	37.6	9.4	34.3	(684)
Drug-related											
Drug(s) & Illness:											
Accident	5.8	2.0	4.0	9.3	2.6	--	4.0	4.0	0.7	3.7	(75)
Suicide	0.3	--	1.0	7.7	2.0	--	0.5	--	--	1.5	(29)
Unknown	0.7	1.3	1.0	0.3	--	6.0	1.5	0.8	2.0	1.9	(38)
Subtotal	6.8	3.3	6.0	17.3	4.6	6.0	6.0	4.8	2.7	7.1	(142)
Drug(s) & external event:											
Accident	9.5	1.3	4.0	0.7	2.6	0.7	3.0	1.2	2.0	2.8	(55)
Suicide	3.1	1.3	3.0	0.7	0.7	0.2	5.0	1.2	2.7	1.8	(35)
Homicide	15.6	6.0	--	1.3	0.7	1.2	36.2	3.2	28.0	9.3	(187)
Unknown	1.0	1.3	--	--	--	1.7	--	0.4	--	0.7	(13)
Subtotal	29.2	9.9	7.0	2.7	4.0	3.8	44.2	6.0	32.7	14.6	(290)
Drug(s) & sequelae of drug abuse:											
Accident	1.4	1.3	1.0	0.7	2.0	0.5	2.5	0.4	2.7	1.2	(24)
Unknown	--	--	--	--	--	8.2	1.0	--	2.0	1.9	(38)
Subtotal	1.4	1.3	1.0	0.7	2.0	8.7	3.5	0.4	4.7	3.1	(62)
Total [a]	100.1	99.9	100.0	100.0	100.0	99.8	99.9	100.0	100.2	100.0	
Number	(295)	(150)	(100)	(300)	(151)	(403)	(199)	(250)	(150)		(1998)

[a] Because of rounding, some percentages do not add to precisely 100.0%.

TABLE 4.02

Role of Drug in Death Cases, by City (Survey 2, N=1004)

| Role of Drug in Death: | Percent of Cases | | | | | | | | | | |
	Chi-ago %	Cleve-land %	Dal-las %	Los Ang. %	Mi-ami %	New York %	Phila. %	San Fran. %	Wash. D.C. %	All Cities %	No.
Drug-induced											
Single drug:											
Accident	21.1	23.2	8.2	17.4	16.3	--	--	15.4	12.0	11.1	(111)
Suicide	1.6	10.1	24.6	16.0	31.3	10.4	13.6	11.5	18.7	13.7	(137)
Homicide	---	1.5	--	--	--	--	--	--	--	0.1	(1)
Unknown	1.6	1.5	11.5	0.7	--	41.3	11.7	1.0	5.3	12.7	(127)
Subtotal	24.3	36.3	44.3	34.1	47.6	51.7	25.3	27.9	36.0	37.6	(376)
Polydrug:											
Accident	34.4	42.0	4.9	38.9	10.0	--	2.9	37.5	16.0	19.3	(194)
Suicide	3.1	10.1	29.5	25.7	26.3	2.9	14.6	16.4	4.0	12.9	(129)
Homicide	--	--	--	--	--	--	1.0	--	--	0.1	(1)
Unknown	1.6	1.5	8.2	--	--	30.4.	33.0	2.9	1.3	11.9	(119)
Subtotal	39.1	53.6	42.6	64.6	36.3	33.3	51.5	56.8	21.3	44.2	(443)
Drug-related											
Drug(s) & Illness:											
Accident	2.3	--	1.6	0.7	--	2.9	1.0	1.0	2.7	1.6	(16)
Suicide	0.8	--	--	--	1.3	--	1.0	1.0	--	0.4	(4)
Unknown	1.6	--	6.6	--	--	0.8	--	--	--	0.8	(8)
Subtotal	4.7	--	8.2	0.7	1.3	3.7	2.0	2.0	2.7	2.8	(28)
Drug(s) & external event:											
Accident	9.4	--	1.6	--	5.0	1.7	2.9	3.9	2.7	3.0	(30)
Suicide	5.5	2.9	--	--	3.8	0.8	2.9	1.9	--	1.9	(19)
Homicide	14.8	5.8	--	--	5.0	5.8	14.6	4.8	28.0	8.2	(82)
Unknown	1.6	--	--	--	--	--	--	--	1.3	0.3	(3)
Subtotal	31.3	8.7	1.6	--	13.8	8.3	20.4	10.6	32.0	13.4	(134)
Drug(s) & sequelae of drug abuse:											
Accident	0.8	1.5	3.3	0.7	1.3	2.1	1.0	2.9	2.7	1.7	(17)
Unknown	--	--	--	--	--	0.8	--	--	5.3	0.6	(6)
Subtotal	0.8	1.5	3.3	0.7	1.3	2.9	1.0	2.9	8.0	2.3	(23)
Total [a]	100.2	100.1	100.0	100.1	100.3	99.9	100.2	100.2	100.0	100.3	
Number	(128)	(69)	(61)	(144)	(80)	(240)	(103)	(104)	(75)		(1004)

[a] Because of rounding, some percentages do not add to precisely 100.0%.

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suicides due to the direct effect of a single drug in the earlier than the later survey, but polydrug suicides were more frequent in the later survey.

New York: There were large proportions of cases "unknown" as to mode in both surveys, making comparisons difficult.

Philadelphia: There was a substantial number of "unknowns." One difference noted was a drop in drug-involved homicides from the first to the second survey.

San Francisco: A somewhat larger proportion of deaths in single-drug accidents and suicides was reported in the earlier survey, and more polydrug accidents in the later one.

Washington D. C. There was a higher proportion of single-drug accidents in the earlier survey, and a higher proportion of polydrug accidents in the second one.

The only discernible trend both overall and in several of the separate cities was a shift from single-drug-induced to polydrug-induced deaths. These may have reflected changing patterns within cities, over time, of the role of psychoactive drugs in causing death, or changing standards over time as different individuals filled out reporting forms. The notion of representativeness held by medical examiners and coroners of the demographic and bio-medical characteristics of psychoactive drug-involved deaths processed yearly by their offices was quite flexible and impressionistic. The case selection for the first survey was not random and relied heavily on the medical examiners' and coroners' impressions of representativeness. The later survey aimed for random selection and, hence, should provide a truer representative sample.

Chapter 5

Treatment of Victim Prior to Death

SUMMARY

Inquiries were made about two types of treatment prior to death: enrollment in a program for drug abuse treatment or rehabilitation and emergency treatment immediately prior to death. In fairly large proportions of the cases, there was no information about the former. Among those cases about whom information was available, very few had been enrolled at time of death; 8 percent were in methadone maintenance programs. Only a small proportion, reported primarily by physicians, received emergency treatment immediately prior to death. The major types of management were assisted breathing, medication, heart massage, and procedures involving the trachea.

TREATMENT OF VICTIM PRIOR TO DEATH[1]

Current Enrollment in a Drug Abuse Treatment or Rehabilitation Program

In Survey 1, a small proportion (21.8 percent) of the 2000 cases were known to be enrolled at time of death in some kind of treatment or rehabilitation program. In 31.6 percent, the information was not known. Questioning in this area was clarified and expanded when the reporting form was revised for Survey 2, thus making comparisons between the surveys somewhat difficult.

Among the cases on which information was available in Survey 2, the overwhelming majority had not been enrolled in a program at time of death (86.1 percent.). Among those who had been enrolled, the largest proportion (8.1 percent) were in methadone maintenance (see table 5.01). Cities varied considerably in the proportions of cases

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1. Data for this portion of the study were obtained principally from responses to Part V (Treatment Prior to Death) of the reporting form, except for the information concerning drug abuse treatment or rehabilitation programs, which was contained in Part I (General), item #24, of the Survey 1 form and in Part I, items #24-26, of the revised form used in Survey 2.

TABLE 5.01

Enrollment in Dug Abuse Treatment or Re-
habilitation at Time of Death, by City
(Survey 2, N=1004)

Enrollment and Type of Program at time of Death	Chic-ago %	Cleve-land %	Dal-las %	Los Ang. %	Mi-ami %	New York %	Phila. %	San Fran. %	Wash. D.C. %	All Cities %	No.
Methadone detoxification	--	20.0	--	3.3	--	1.2	1.3	(1)[a]	--	1.8	(10)
Methadone maintenance	8.8	15.0	--	6.7	4.3	7.7	14.1	--	9.8	8.1	(46)
Other program, known	--	5.0	--	3.3	--	0.9	2.6	(2)[a]	--	1.4	(8)
Other program, type unknown	8.8	5.0	--	13.3	--	0.4	7.7	--	--	2.6	(15)
Not enrolled	82.4	55.0	100.0	73.3	95.7	89.8	74.4	(5)[a]	90.2	86.1	(492)
Total Known	100.0	100.0	100.0	99.9	100.0	100.0	100.1	a	100.0	100.0	
Number Known	(34)	(20)	(36)	(30)	(69)	(235)	(78)	(8)	(61)		(571)
Number Unknown	(94)	(49)	(25)	(114)	(11)	(5)	(25)	(96)	(14)		(433)
TOTAL Number	(128)	(69)	(61)	(114)	(80)	(240)	(103)	(104)	(75)		(1004)

Percent of cases

[a]Too few cases for computing reliable percentages.

[b]Because of rounding, all percentages may not add to precisely 100.0%

known or unknown for enrollment in rehabilitation or treatment programs. Philadelphia, Miami, and New York were the only cities where a reasonably large proportion could be classified (see table 5.02). A similar pattern of lack of information, with the exception of Philadelphia, Miami, and New York, is seen in table 5.03, which summarizes data on frequency of involvement in rehabilitation programs.

Treatment for Drug Overdose Immediately Prior to Death

A question on recent treatment for overdose was asked on two parts of the reporting form: Part I, designed as an inclusive short form, and Part V, designed to gather detailed information on treatment. Some discrepancy between answers on the two parts occurred in both surveys.

Eliminating cases where the information was unknown, Part I responses for Survey 1 indicated that only 25.6 percent of cases received treatment; Survey 2 showed 11.9 percent (table 5.04). Part V responses were relatively close to those proportions, 21.8 percent and 13.9 percent, respectively. It is possible that the discrepancy between results of the two surveys is due to the wording of questions relating to treatment prior to death. (In Survey 2, answers relating to treatment for gunshot wounds, disease, or other disorders not directly related to treatment for psychoactive drug ingestion were automatically eliminated.) Major intercity differences in Survey 2 were restricted to a low incidence of treatment prior to death in San Francisco (6.7 percent) and New York (4.2 percent). The other seven cities had a narrow range of treatment rates, from 12.0 percent in Washington, D. C. to 19.4 percent in Philadelphia (table not shown).

Locations Where Decedents Were Treated Prior to Death

As many as three locations could be listed where the decedent was treated before death. However, the numbers of second and third responses given were small. The total responses for Survey 1 and Survey 2 are given in table 5.05. Most treatments were recorded as given in hospitals (including emergency rooms). Intercity differences were not notable (table not shown).

Persons Who Treated the Decedents for Acute Drug Involvement

Up to three persons could be listed who treated the deceased prior to death These data are summarized in table 5.06. Most treatments (66.3 percent for Survey 2, for example) were reported as given by physicians. Los Angeles differed from the other cities in reporting treatment by a physician in only 36.7 percent of the cases and in a uniquely high treatment rate by paramedics (33.3 percent) compared with the other eight cities (table not shown).

TABLE 5.02

Most Recent Enrollment in Drug Abuse Treatment
or Rehabilitation, Cases Not Enrolled at Time
of Death, by City (Survey 2, N=1004)

Most Recent En-rollment, If not at Death:	Percent of Cases Not Enrolled at Time of Death										
	Chic-ago	Cleve-land	Dal-las	Los Ang.	Mi-ami	New York	Phila.	San Fran.	Wash. D.C.	All Cities	
	%	%	%	%	%	%	%	%	%	%	No.
Past month	--	4.7	--	2.1	--	0.9	16.5	---	2.7	2.8	(27)
Past year	--	1.6	--	0.7	--	2.3	4.9	--	1.4	1.3	(13)
More than one year before	0.8	--	--	1.4	2.3	0.9	1.9	1.0	--	0.9	(9)
Enrolled but not known when	2.4	--	--	1.4	7.5	1.8	2.9	1.0	--	2.0	(19)
Never enrolled	17.5	7.8	41.0	14.0	68.8	87.2	41.8	2.0	39.2	40.3	(391)
Unknown if ever enrolled	79.4	85.9	59.0	80.4	22.5	6.9	32.0	96.0	56.8	52.7	(511)
Numbers not[a] enrolled at time of death	100.1 (126)	100.0 (64)	100.0 (61)	100.0 (143)	101.1 (80)	100.0 (218)	100.0 (103)	100.0 (101)	100.1 (74)	100.0	(970)

[a]Because of rounding, all percentages may not add to precisely 100.0%.

TABLE 5.03

Frequency of Participation in Drug Abuse
Treatment or Rehabilitation Programs by
City (Survey 2, N=1004)

Frequency of Participation in Program:	Chi-cago	Cleve-land	Dal-las	Los Ang.	Mi-ami	New York	Phila.	San Fran.	Wash. D.C.	All Cities	
	Percent of Cases										
	%	%	%	%	%	%	%	%	%	%	No.
Once	--	--	1.6	--	1.3	1.3	--	--	2.7	0.7	(7)
Twice	--	--	--	--	--	--	1.0	--	1.3	0.2	(2)
Three or more times	--	1.5	--	2.1	1.3	0.4	2.9	--	--	0.9	(9)
At least once, but number unknown	2.3	1.5	--	3.5	2.5	8.3	12.6	1.0	1.3	4.6	(46)
Never	16.4	4.4	37.7	13.9	67.5	77.5	40.8	1.9	37.3	37.8	(379)
Unknown	81.3	92.8	60.7	80.5	27.5	12.5	42.7	97.1	57.3	55.9	(561)
TOTAL[a]	100.0	100.2	100.0	100.0	100.1	100.0	100.0	100.0	99.9	100.0	
Number	(128)	(69)	(61)	(144)	(80)	(240)	(103)	(104)	(75)		(1004)

[a] Because of rounding, all percentages may not add to precisely 100.0%

TABLE 5.04

Incidence of Treatment Given Prior to Death,
Responses to Questions in Survey 1 (N=2000)
and Survey 2 (N=1004)

Survey 1		Survey 2	
Hospitalization and/or Medical Attention Given up to 10 Weeks Prior to Death[a]		Treatment for Drug Overdose Immediately Prior to Death[c]	
Yes	25.6%	Yes	11.9%
No	74.4	No	88.1
	100.0%		100.0%
Number yes or no	(1912)	Number yes or no	(971)
Number unknown	(86)	Number unknown	(33)
Number missing	(2)		
Total Number	(2000)	Total number	(1004)
Treatment Given Prior to Death[b]		Treatment for the Fatal Dose Prior to Death[d]	
Yes	21.8%	Yes	13.9%
No	78.2	No	86.1
	100.0%		100.0%
Number yes or no	(1961)	Number yes or no	(997)
Number unknown	(29)	Number unknown	(7)
Number missing	(10)		
Total number	(2000)	Total number	(1004)

a Part I, Item No. 25
b Part V, Item No. 1
c Part I, Item No. 27
d Part V, Item No. 2

TABLE 5.05

Locations Where Cases Were Treated Prior to Death, Surveys 1 and 2

Locations Where Treated:	Percent of Mentions[a]	
	Survey 1	Survey 2
Own home	2.2%	11.0%
Other home	1.6	5.5
Physician's office	2.2	--
Emergency room	30.9	28.2
Hospital	44.6	47.9
Ambulance/mobile emergency unit	--	6.8
Other	18.5	0.6
	100.0%	100.0%
Number of mentions[a]	(556)	(163)

[a] Up to 3 mentions per case were allowed.

TABLE 5.06

Types of Persons Who Treated Decedents Prior to Death, Surveys 1 and 2

Types of Persons Who Treated:	Percent of Mentions[a]	
	Survey 1	Survey 2
Spouse or family member	1.2%	3.7%
Friend	2.0	6.8
Ambulance attendant	17.0	6.1
Paramedics	b	9.2
Nurse	23.0	2.4
Physician	44.0	66.3
Police/fireman	b	3.7
Other	12.8	1.8
	100.0%	100.0%
Number of mentions[a]	(649)	(163)

[a] Up to 3 mentions per case were allowed.

[b] Not asked

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Types of Medical Management Prior to Death

Respondents could list up to three types of medical procedures provided the patient before death. Not surprisingly, assisted breathing, medication, heart massage, and endotracheal intubation or tracheostomy were the most common types of treatment (see table 5.07). Intercity differences were not great (table not shown).

Medications, Given or Taken Within Two Weeks of Death

A tabulation was made listing all drugs reported to have been given or taken within two weeks of death, following the LEA classification described in chapter 2 (see appendix B, tables 5a through 5d, pages 143 to 172). It may not be surprising that most of them were not psychoactive drugs but fell in the "miscellaneous" classification (e.g., antibiotics, cold medicine, and the like), used presumably for other treatment purposes. On the other hand, the large number of psychoactive drugs (e.g., narcotics, barbiturates, other sedatives, tranquilizers, and analgesics) also taken by these individuals in the two weeks before death points to the high usage of these drugs by individuals prone to drug-involved death.

This study gives definite information about actual treatment prior to death on only 21.8 percent of Survey 1 and 13.9 percent of Survey 2 cases. There is no information about any drugs that the rest of the decedents had been taking before death, except for the psychoactive drugs most likely to have been involved in the death. Data obtained during the on-site investigation did provide information on the psychoactive drugs found at the scene of death (chapter 6, table 6.08).

TABLE 5.07

Types of Management Used in Treatment Prior
to Death, Surveys 1 and 2

Types of Management in Treatment:	Percent of Mentions[a]	
	Survey 1	Survey 2
Vomiting	1.4%	1.3%
Gastric lavage	5.8	3.6
Medication	26.9	22.0
Assisted breathing	22.9	31.4
Tracheal help	13.9	12.6
Heart Massage	b	16.5
Dialysis	2.9	b
Observation	4.0	3.6
Other	22.2	9.0
	100.0%	100.0%
Number of mentions[a]	(446)	(223)

[a]Up to 3 mentions per case were allowed.

[b]Not asked.

Chapter 6

On-Site Investigations

SUMMARY

On-site investigations were performed in 80.0 percent of the 2000 drug-involved deaths in Survey 1 and in 77.3 percent of the 1004 deaths in Survey 2, with an intercity range from 51.0 to 98.6 percent for Survey 2.   In order of frequency, these examinations were usually performed by trained police, coroners' or medical examiners' investigators, regular police, or physicians other than pathologists.

Events surrounding the death were first reported by a family member or friend in about two-thirds of the cases.   The body was judged to have been found at the site of death about 90 percent of the time.   About 80 percent of the cases showed no evidence of external injuries.   Motor vehicle accidents were involved in only 2 or 3 percent of the deaths reported in Surveys 1 and 2.

There was external evidence of poison or drug ingestion in about half of the cases.   Needle marks and track marks were the most common findings.   Evidence of drug use at the scene was also present in about half the cases.   Needles, vials, or other drug paraphernalia were found about a third of the time. Drugs were found at the scene about one-fourth of the time.

ON-SITE   INVESTIGATIONS

Extent of On-Site Investigations

On-site investigations were carried out on 80.0 percent of the 2000 drug-involved deaths in Survey 1 and 77.3 percent of the 1004 deaths in Survey 2.   There were three cases in Survey 1 and five cases in Survey 2 in which the respondent could not ascertain whether an on-site investigation had been performed.   There was some intercity variation, ranging in Survey 2, for example, from a high of 98.6 percent on-site investigations performed in Los Angeles to a low of 51.0 percent reported performed in Philadelphia.

Who Conducted the On-Site Investigation

Most on-site investigations were conducted by trained police (38.2 percent in Survey 1 and 26.3 percent in Survey 2) or regular

TABLE 6.01

Types of Persons Who Conducted the On-Site Investigations,
Surveys 1 and 2

	Percent of Mentions[a]	
Types of Persons Who Conducted On-Site Investigations:	Survey 1	Survey 2
Police Officer, trained in this field	38.2%	26.3%
Police Officer, not trained in this field	18.8	23.0
M.D., not a pathologist	10.3	13.0
M.D., trained in pathology	1.4	1.0
Medical Examiner	0.8	0.5
Deputy Medical Examiner	5.3	0.7
Deputy Coroner, M.D.	0.1	0.0
Deputy Coroner, non-M.D.	1.5	0.3
Coroner, non-M.D.	0.1	0.1
Investigator	23.3	34.6
Other	0.2	0.5
	100.0%	100.0%
Number of mentions[2]	(2139)	(1110)

[a] Up to 2 mentions per case were tabulated. Thus the number of mentions may exceed the number of cases.

police (18.8 percent in Survey 1 and 23.0 percent in Survey 2), a coroner's or medical examiner's investigator (23.3 percent in Survey 1 and 34.6 percent in Survey 2) or a physician who was not a pathologist (10.3 percent in Survey 1 and 13.0 percent in Survey 2).

A complete classification of persons (one or more) who conducted these on-site investigations is shown in table 6.01. There were marked intercity differences in the types of persons who performed these investigations, reflecting the differing administrative arrangements in the nine cities. This is another situation making for difficulty in combining data across cities. These differences for Survey 2 are shown in table 6.02.

Reporting the Events Surrounding Death

The events surrounding these drug-related deaths were primarily reported by a family member (37.8 percent in Survey 1 and 36.0 percent in Survey 2), a friend (35.4 percent in Survey 1 and 28.5 percent in Survey 2), a bystander (13.4 percent in Survey 1 and 11.1 percent in Survey 2) or the police (10.4 percent in Survey 1 and 13.0 percent in Survey 2) (see table 6.03). Intercity differences in this factor were not great (table not shown).

TABLE 6.02

Types of Persons Who Conducted the On-Site Investigation,
by City (Survey 2, N=1004)

Types of Persons Who Conducted the Investigation:	Percent of Mentions[a]								
	Chi-cago %	Cleve-land %	Dal-las %	Los Ang. %	Mi-ami %	New York %	Phila. %	San Fran. %	Wash. D.C. %
Police officer, trained in this field	68.0	16.4	5.3	7.9	87.5	8.8	44.9	15.7	84.9
Police officer, not trained in this field	32.0	83.6	15.4	43.2	10.0	6.6	4.4	5.5	--
M.D., not a pathologist	--	--	--	0.8	1.3	76.4	--	--	3.8
M.D., trained in pathology	--	--	--	--	--	5.5	--	--	1.9
Medical Examiner	--	--	2.4	--	1.2	--	1.4	--	--
Deputy Medical Examiner	--	--	--	--	--	--	4.4	--	9.4
Coroner, not an M.D.	--	--	--	0.4	--	--	--	--	--
Deputy Coroner, not an M.D.	--	--	--	1.1	--	--	--	--	--
Investigator	--	--	76.9	46.2	--	--	44.9	78.8	--
Other	--	--	--	0.4	--	2.7	--	--	--
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of mentions[a]	(103)	(61)	(169)	(266)	(80)	(182)	(69)	(127)	(53)

[a] Up to 2 mentions per case were tabulated. Thus, the number of mentions may exceed the number of cases.

TABLE 6.03

Types of Persons First Reporting Events
Surrounding the Death (Surveys 1 and 2)

Person First Reporting Events Surrounding the Death:	Percent of Cases	
	SURVEY 1 %	SURVEY 2 %
Police	10.4	13.0
Family member	37.8	36.0
Acquaintance or friend	35.4	28.5
Non-involved bystander	13.4	11.1
Attending physician	1.5	6.8
Other medical personnel	1.1	2.3
Other	0.4	2.3
Total	100.0	100.0
Number of cases[a]	(1569)	(985)

[a] Excludes "unknown" and "missing" cases. Numbers represent bases on which percentages were calculated.

Occurrence of Death at Site of Discovery of the Body

Restricting attention to those cases where the information was available, 93.0 percent of the deaths in Survey 1 and 86.2 percent in Survey 2 were judged to have occurred at the site of discovery of the body. Intercity differences were small (table not shown).

Fingerprinting of the Deceased

Fingerprinting was carried out in the majority of the cases in both Surveys 1 and 2. Marked intercity differences exist. As illustrated in table 6.04, five the the cities fingerprinted almost all cases (range 82 percent to 100 percent), while three cities rarely recorded them (range 2.9 percent to 16.9 percent). Considering the many potential uses of fingerprints, this variation is hard to understand.

Examination of Clothing

The question on clothing was placed in different sections of the forms for the two surveys and thus took on somewhat different meaning in the two versions; only the Survey 2 question, placed in the section on postmortem, is relevant to the on-site investigations. As expected, answers to the Survey 2 question reported a much higher percentage of cases to have had examinations of clothing (61.9 percent). As shown in table 6.05, marked intercity differences exist, from a high of 88.3 percent of cases with clothing examinations in San Francisco to a low of 11.6 percent in Cleveland.

Bodily Evidence of External Injuries

Most cases showed no evidence of external injuries (80.5 percent in Survey 1 and 83.3 percent in Survey 2) and intercity differences were not great (table not shown). The types of external injuries found are summarized in table 6.06.

Involvement in Motor Vehicle or Industrial Accidents

Motor vehicle accidents were involved in only 2 to 3 percent of the deaths in Surveys 1 and 2. Industrial accidents were involved in less than 1 percent of the deaths in either survey (table not shown).

External Bodily Evidence of Poison or Drug Ingestion

There was no external evidence of poison or drug ingestion in 53.0 percent of cases in Survey 1 and 44.2 percent in Survey 2 (figures not shown). The question on external evidence of poison or drug ingestion was revised significantly between the two surveys, making comparison of types of evidence somewhat complicated. Needle marks were the most common finding, seen in 52.1 percent of Survey 1 mentions and 39.3 percent of Survey 2 mentions. Track marks ranked second, being reported in 35.5 percent of Survey 1 mentions and 37.2 percent of Survey 2 mentions. Whether the body showed discoloration from possible ingestion of a foreign substance was asked

TABLE 6.04

Incidence of Fingerprinting, by City (Survey 2, N = 1004)

Was the body finger- printed?						Percent of Cases					
	Chi- cago	Cleve- land	Dal- las	Los Ang.	Mi- ami	New York	Phila.	San Fran	Wash. D.C.	All Cases	
	%	%	%	%	%	%	%	%	%	%	No.
Yes	16.9	2.9	98.4	99.3	100.0	12.9	45.1	99.0	82.7	54.7	(545)
No	83.1	97.1	1.6	0.7	--	87.1	54.9	1.0	17.3	45.3	(451)
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	
Number	(124)	(69)	(61)	(141)	(80)	(240)	(102)	(104)	(75)		(996)[a]

[a] Information on 8 cases was not available.

TABLE 6.05

Incidence of Study of Clothing of Deceased in the On-Site Investigation, by City (Survey 2, N = 1004)

Was the Clothing of the Deceased Studied in the On-site Investi- gation?						Percent of Cases					
	Chi- cago	Cleve- land	Dal- las	Los Ang.	Mi- ami	New York	Phila.	San Fran.	Wash. D.C.	All Cases	
	%	%	%	%	%	%	%	%	%	%	No.
Yes	34.7	11.6	78.7	25.5	67.1	84.2	72.8	88.3	77.3	61.9	(613)
No	65.3	88.4	21.3	74.5	32.9	15.8	27.2	11.7	22.7	38.1	(378)
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	
Number of cases	(124)	(69)	(61)	(137)	(79)	(240)	(103)	(103)	(75)		(991)[a]

[a] Information on 13 cases was not available.

only in regard to Survey 1 cases, and only 2.3 percent of those cases showed such discoloration. These findings are summarized in table 6.07. Intercity differences were small (table not shown).

Evidence of Drug Usage at Scene

Since the question asked in Survey 2 dealt with evidence of drug usage at the scene of death more fully than the Survey 1 question, only Survey 2 responses are reported here. There was no evidence of drug usage at the scene of death in 46.3 percent of cases (table not shown). Intercity differences in types of evidence were noted, as shown in table 6.08.

TABLE 6.06

Bodily Evidence of External Injury (Surveys 1 and 2)

Types of External Injuries Found:	Percent of Mentions	
	SURVEY 1	SURVEY 2
	%	%
Bullet	39.7	51.5
Stabbing or cuts	9.8	11.2
Blunt instrument	2.8	5.9
Strangulation	2.2	3.0
Thermal burns	5.4	3.6
Chemical burns	0.9	--
Electrical burns	0.3	--
Crushing	2.8	1.1
A fall	a	5.3
Other	36.0	18.3
Total	100.0%	100.0%
Number of Mentions[b]	(317)	(169)

[a]Not asked.

[b]In Survey 1, up to 5 responses were tabulated and in Survey 2, up to 2 responses. These numbers do not include cases where no evidence was found or the information was missing. In Survey 1, 1312 cases were recorded as "none" and in Survey 2, 843 cases.

TABLE 6.07

External Bodily Evidence of Drug Ingestion in the On-Site Investigation (Surveys 1 and 2)

External Bodily Evidence of Drug Ingestion:	Percent of Mentions	
	Survey 1	Survey 2
	%	%
Needle marks	52.1	39.3
Track marks	35.5	37.2
Skin puncture	a	6.5
Discharge	a	13.4
Discoloration	b	2.3
Other	12.4	1.4
	100.0	100.0
Number of mentions[c]	(865)	(666)

[a]Not asked

[b]Asked in a separate question with only "yes" or "no" categories of response. 2.3% of cases reported discoloration.

[c]Up to 2 responses were tabulated. These numbers do not include cases where no evidence was found or the information was missing. In Survey 1, 979 cases were recorded as 'hone" and in Survey 2, 527 cases.

TABLE 6.08

Evidence of Drug Usage at the Scene,
by City (Survey 2)

Evidence of Drug Usage at Scene:	Percent of Mentions[a]									
	Chi-cago	Cleve-land	Dal-las	Los Ang.	Mi-ami	New York	Phila.	San Fran.	Wash. D. C.	All Cities
	%	%	%	%	%	%	%	%	%	%
Drugs at scene	50.0	38.9	51.1	43.7	61.8	32.4	50.0	48.7	12.9	45.1
Needles, vials, bottles	46.9	58.3	34.0	55.5	38.2	66.2	48.4	50.0	80.6	52.2
Other	3.1	2.8	14.9	0.8	--	1.4	1.6	1.3	6.5	2.7
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of mentions[b]	(32)	(36)	(47)	(119)	(76)	(71)	(64)	(78)	(31)	(554)

[a] Up to 2 responses were tabulated.

[b] Numbers do not include cases where no information was recorded or evidence was un-known.

Chapter 7

Postmortem Findings

SUMMARY

Narrative autopsy reports may vary with the recording practices of
the autopsy surgeon, from cryptic to verbose, utilizing a non-
uniform, technical vocabulary that is vaguely defined and open to
a wide range of interpretations. Postmortem examinations were
carried out on almost all Survey 1 and 2 cases, and all of them
were done by physicians, most of whom were Board-certified. About
half of the autopsies in both surveys included microscopic examina-
tions, presumably increasing the completeness and accuracy of the
findings. About 30 percent of the cases in both surveys had post-
mortem chemical, hematological, or immunological studies; practically
none had bacteriological or radiological (X-ray) studies postmortem.

Profiles of the postmortem findings of various classes of drugs
were drawn by selecting those cases in which only one drug or
category of drug was reported to be involved in the death. There
was a close correspondence between these single drug cases and all
cases, suggesting that the single drug cases do not differ signi-
ficantly from polydrug cases in overall autopsy findings.

There was a suggestion that the analgesic, barbiturate, and tran-
quilizer-involved victims were in a poorer state of general health
at the time of their death than other psychoactive drug-involved
decedents, perhaps a function of their older age. These data also
confirmed the well-published association of narcotism with tattoos
and the external stigmata of intravenous self-medication? such as
recent and old track marks, subcutaneous fibrosis, and pigmented
scars. Stigmata of intravenous self-medication were also common
for stimulant cases, Acute pulmonary edema was common in all drug
groups and is presumably a nonspecific end-stage finding of con-
gestive heart failure and death from drug overdose.

POSTMORTEM FINDINGS

These data were obtained mainly from responses to Part IV (Post-
mortem Findings) of the forms used in Surveys 1 and 2, except where
identified as coming from other sections. There are slight incon-
sistencies between Parts I and IV in reporting the number of autopsies
or postmortem examinations. A possible explanation in Survey I is

TABLE 7.01

Types of Postmortem Examinations (Surveys 1 and 2)

Type of Examination:	Percent of Cases	
	Survey 1 %	Survey 2 %
Complete autopsy (all systems, head, and cavities)	89.4	89.7
Complete autopsy excluding head	2.8	1.8
Partial autopsy	1.4	0.8
External examination only	4.7	6.9
Other	0.3	0.5
None	--	0.3
Information not available	1.4	--
	100.0	100.0
Number	(2000)	(1004)

that the term "postmortem examination" used in Part IV is more general and inclusive than the term "'autopsy" used in Part I. All autopsies are postmortem examinations, but not all postmortem examinations are autopsies. For Survey 2, another explanation may lie in the variety of specific choices allowed in Part IV, which included a category "Other" that was completed for five cases and counted as "No Postmortem." Table 7.01 shows the extent to which complete autopsies were done: almost 90 percent overall.

The forms were filled out primarily by physicians who performed the examinations or, in a small percent of the cases, another physician. The autopsy report was the most difficult part of the medical examiners' and coroners' records to code and is open to the widest interpretation because of variation in grammatical style of the autopsy surgeon, the lack of uniform terminology used in describing various normal and abnormal findings, and so forth.

The nine reporting centers seemed well staffed with highly qualified autopsy surgeons: In Survey 1, Board-certified forensic pathologists performed 43.0 percent of the examinations. Board-certified pathologists performed an additional 35.5 percent, and almost all the others who carried out postmortem examinations had some formal training in pathology. In Survey 2, the corresponding figures are 57.7 percent, 36.2 percent, and 5.2 percent. Neither survey showed examinations done by nonphysicians without formal training in pathology, although 0.9 percent of the examinations in Survey 2 were reported as performed by persons "unknown" (table not shown).

In Survey 1, nearly all examinations (94.6 percent) were performed in local morgues; 1.1 percent were performed in hospitals; and 4.3 percent were done in mortuaries. Also in Survey 2, 97.0 percent were performed in local morgues; 1.2 percent in hospitals; and 1.6 percent in mortuaries (table not shown).

The large number of histological examinations was surprising. In Survey 1, 47.4 percent of the cases had some histological studies done, the majority having hemotoxylin and eosin stains alone (33.9 percent) or together with polarized light (12.2 percent). In Survey 2, 58.2 percent had some histological studies done, the majority having hemotoxylin and eosin stains (57.9 percent); 10.6 percent had polarized light histological studies done (table not shown).

In contrast, no bacteriology tests were done in over 98 percent of the cases in both surveys. In Survey 1, 32.4 percent of the cases had postmortem chemical, hematological, or immunological studies done. Such studies were done in 30.7 percent of the Survey 2 cases. Only 2.7 percent of Survey 1 cases, and 2.7 percent of Survey 2 cases were X-rayed. The clothes of the deceased were examined in 17.1 percent of Survey 1 cases. This question was not asked on Part IV in Survey 2, the question having been transferred to Part II (table not shown).

The bodies were neither embalmed nor decomposed in the large majority of cases (88.1 percent in Survey 1 and 91.5 percent in Survey 2). Bodies were decomposed in 8.2 percent of Survey 1 cases; 3.1 percent were embalmed, and 0.2 percent were both decomposed and embalmed. In Survey 2, 6.5 percent were decomposed, 1.7 percent were embalmed, and 0.5 percent were both decomposed and embalmed (table not shown).

Profiles for the postmortem findings of various categories of drugs were attempted by choosing those cases in which only one drug was reported, ignoring the presence or absence of alcohol. In Survey 1, 851 of the 2000 cases qualified for this analysis as "single drug cases." In Survey 2, there were 498 single drug cases. There is a close correspondence of frequencies of response for each question concerning autopsy findings between the single drug cases and all 3004 cases, suggesting that the single drug cases do not differ significantly from the polydrug cases in overall autopsy findings.

Table 7.02 shows the general health rating for the single drug cases of Surveys 1 and 2. There is a suggestion that the analgesic, barbiturate, and tranquilizer groups were in fair or poor health more often than those who died from effects of other drugs, All psychostimulant drug cases in both samples were judged to be in good health. This may be because the stimulant drug cases were younger. Table 7.03 shows a very low incidence of systemic infection and malnutrition in all cases in both surveys, Sedative drug cases ranked highest for malnutrition in Survey 1 (8 percent), but cases of sedatives in Survey 2 were too few for reliable percentages,

TABLE 7.02

General Health: Postmortem Findings, by
(Single) Drug Type, Surveys 1 and 2

General Health:	Nar- cotics	Anal- gesics	Barbi- turates	Seda- tives	Tran- quilizers	Stimu- lants	Anti- depres- sants	Misc. Drugs	All Single Drug Cases
					Percent of Single Drug Cases				
(SURVEY 1) %	%	%	%	%	%	(N)^a	%	(N)^a	%
Good	79.3	76.0	68.1	60.0	75.7	(13)	73.9	(-)	74.5
Fair	16.6	16.0	23.6	34.0	21.6	(-)	26.1	(-)	20.0
Poor	4.1	8.0	8.3	6.0	2.7	(-)	--	(-)	5.5
TOTAL	100.0	100.0	100.0	100.0	100.0	(a)	100.0	(a)	100.0
Number	(415)	(50)	(263)	(50)	(37)	(13)	(23)	(-)	(851)
(SURVEY 2) %	%	%	(N)^a	%	(N)^a	(N)^a	(N)^a	%
Good	77.9	84.4	49.1	(9)	64.5	(8)	(10)	(15)	70.0
Fair	15.9	9.4	39.5	(8)	35.5	(-)	(5)	(2)	23.3
Poor	6.2	6.3	11.4	(1)	--	(-)	(-)	(1)	6.7
TOTAL^b	100.0	100.1	100.0	a	100.0	a	a	a	100.0
Number	(258)	(32)	(114)	(18)	(31)	(8)	(15)	(18)	(494)

^{a}Cases too few for reliable percentages.

^{b}Total may differ from 100.0% because of rounding.

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TABLE 7.03

Malnutrition and Systemic Infections:
Postmortem Findings, by (Single) Drug Type,
Surveys 1 and 2

					Percent of Single Drug Cases				
Condition:	Nar-cotics	Anal-gesics	Barbit-urates	Seda-tives	Tran-quilizers	Stimu-lants	Anti-depres-sants	Misc. Drug	All Single Drug Cases
(SURVEY 1)	%	%	%	%	%	(N)a	%	(N)a	%
Malnutrition present	2.9	6.0	4.6	8.0	5.4	(-)	--	(-)	3.9
Systemic infection present	3.1	6.0	1.9	--	5.4	(-)	--	(-)	2.7
Number	(415)	(50)	(263)	(50)	(37)	(13)	(23)	(-)	(851)
(SURVEY 2)	%	%	%	(N)a	%	(N)a	(N)a	(N)a	%
Malnutrition present	4.6	6.3	5.2	(-)	--	(-)	(-)	(1)	4.2
Systemic infection present	5.1	3.5	1.8	(2)	3.7	(-)	(1)	(-)	2.9
Number[b]	(259)	(32)	(115)	(18)	(31)	(8)	(15)	(18)	(496)
Number[c]	(256)	(29)	(110)	(18)	(27)	(7)	(15)	(18)	(480)

[a]Cases too few for reliable percentages.

[b]Number available for tabulation of malnutrition findings.

[c]Number available for tabulation of systemic infection findings.

Table 7.04 documents the well-publicized association of external stigmata of intravenous self-medication with narcotism: recent and old track marks, subcutaneous fibrosis, and pigmented scars. Trauma is also high in the narcotic groups. Tattoos were more common in narcotics abusers, as has been reported previously.

Perhaps most striking was that only 8 percent of the (single drug) narcotism cases in Survey 1 and 12 percent in Survey 2 were judged normal on external examination, compared with 31.0 percent for all single drug cases in Survey 1 and 30.3 percent in Survey 2. In both surveys, cases in all single drug classes other than opiates had remarkably higher percentages of normal examinations.

Table 7.05 lists the postmortem findings for the musculoskeletal system. The most common finding for all drug cases, at least 50 percent in every category, was normality.

Table 7.06 shows the postmortem findings for the vascular system. The fact that percentages of sclerosis findings were higher in Survey 2 than in Survey 1 is not easily explained.

Table 7.07 summarizes the postmortem findings for the heart. Normal findings again predominate in both samples; in every category they are over 50 percent. As with sclerosis in the vascular system, it is hard to explain why right ventricular dilatation was more frequent in Survey 1.

Table 7.08 contains the findings from examination of the respiratory system. In general the frequency of "normal" responses was less than in other system examinations. "Foam filling tracheobronchial tree" is most common in narcotic cases. Acute pulmonary edema seems common in almost all groups. Congestion is common and undoubtedly associated with acute pulmonary edema.

Table 7.09 summarizes the postmortem findings in the gastrointestinal system. Many examinations of this system were normal. Fairly high percentages of cases of pill residues were found in those categories of medication normally taken by mouth (analgesics, barbiturates, sedatives, tranquilizers, and antidepressants).

Table 7.10 shows the postmortem findings for the liver. Again, normal findings predominate. The highest percentages of hepatomegaly were found in sedative and tranquilizer cases in Survey 1, and narcotic cases in Survey 2. Narcotic cases lead in portal lymphadenopathy (in both surveys).

Tables 7.11 and 7.12 contain the findings for the spleen and lymph nodes, respectively. The relatively high incidence of lymph nodes "not studied" (35.8 percent of Survey 1 and 17.2 percent Of Survey 2) suggests that the results were not mentioned in the original autopsy report in the medical examiner's or coroner's file. Again, normal findings predominate. Hyperplasia of the lymph nodes was reported in 9.9 percent of narcotic cases in Survey 1 and in 5 Percent of narcotic cases in Survey 2.

Table 7.13 summarizes genitourinary findings. Again, normal findings predominate in both Surveys 1 and 2. Table 7.14 summarizes findings of the endocrine system, and table 7.15 summarizes findings of the nervous system. Nothing of special note was observed.

Tables 7.16 and 7.17 classify the single drug cases by sex and age, respectively, for Surveys 1 and 2. These findings do not differ significantly from the findings in the total of 3004 cases. Note the high incidence of men among narcotic drug cases. Percentages of women were higher than those of men among the analgesic, barbiturate, and sedative and antidepressant cases in one or both surveys. As mentioned elsewhere and shown in table 7.17, younger persons were found more often among narcotic and psychostimulant cases, and older persons more often among sedative, barbiturate, tranquilizer, and antidepressant cases.

These results confirm previous findings discussed by Noguchi in Guide to the Investigation and Reporting of Drug Abuse Deaths (Gottschalk et al. 1977), and do not appear to define striking new profiles for the various drug classes.

COMMENTARY

Analysis of reports of postmortem examinations confirmed previously published observations of postmortem changes in drug-involved deaths.

The monitoring of toxicological proficiency of the project is described in Chapter 8, Details of the Toxicological Examination, and by Dinovo (1976) . The likelihood is that many drugs in the 3004 cases were present and not detected or possibly detected and not present. It seems likely that there were actually fewer single drug and more polydrug cases than reported. Clarification of this issue may make drug-involved postmortem profiles easier to discover, describe, and define. More substantive problems pertain to deciding how a drug found at the time of death relates to drugs used predominantly throughout life and whether a drug found at the time of death is the cause of chronic or acute changes found at postmortem examination.

REFERENCES

Noguchi, T.T. Post mortem examination. Chapter 3, in Guide to the Investigation and ReUporting of Dru Abuse Deaths Gottshalk, L.A; McGuire, F.L.; Dinovo, E.C.; Birch, H.; and Heiser, J.F., eds. National Institute on Drug Abuse. DHEW Publication No. (ADM) 77-386. Washington, D.C.: Supt. of Docs., U.S. Govt. Print. Off., 1977.

Dinovo, E.C., and Gottschalk, L.A. Results of a nine-laboratory survey of forensic toxicology proficiency. Clin Chem, 22:943-946, 1976.

TABLE 7.04a

External Examination: Postmortem Findings, by (Single) Drug Type

a. SURVEY 1

External Findings:	Nar- cotics	Anal- gesics	Barbi- turates	Seda- tives	Tran- quilizers	Stimu- lants	Anti- depres- sants	All Single Drug Cases
	%	%	%	%	%	(N)a	%	%
Normal	8.0	72.0	49.4	56.0	49.0	(5)	61.0	31.0
Froth around nose or mouth	16.6	6.0	4.6	22.0	11.0	(-)	4.3	11.8
"Tracks" with recent hemorrhage	53.7	4.0	5.3	8.0	8.1	(5)	4.3	29.6
"Tracks" without recent hemorrhage	46.0	2.0	6.1	2.0	5.4	(3)	4.3	25.3
Pigmented scars	19.5	2.0	1.9	--	5.4	(2)	4.3	10.8
Tattoos	13.3	2.0	6.1	4.0	8.1	(1)	8.6	9.4
Atrophic scars	6.3	2.0	14.0	10.0	11.0	(1)	--	8.6
Scars in jugular area	1.0	--	0.8	--	--	(-)	--	0.7
Scars on wrists or forearm	12.5	8.0	7.2	6.0	11.0	(1)	--	9.8
Subcutaneous fibrosis	9.4	--	0.4	--	--	(1)	--	4.8
Starch or talc deposits	1.0	--	--	--	--	(-)	--	0.5
Subcutaneous abscesses	1.7	--	0.4	--	--	(-)	4.3	1.1
Jaundice	0.7	--	--	2.0	--	(-)	--	0.5
Cigarette burns	0.2	--	--	--	--	(-)	--	0.1
Bruises, abrasions or contusions	12.0	8.0	15.0	12.0	11.0	(3)	17.0	13.0
Other burns	1.0	2.0	2.3	6.0	--	(-)	--	1.7
Other trauma	15.1	--	11.0	6.0	8.1	(4)	4.3	12.1
Congestion	b	b	b	b	b	b	b	b
Edema	b	b	b	b	b	b	b	b
Gynecomastia	b	b	b	b	b	b	b	b
Other findings, drug-related	23.4	4.0	4.9	--	8.1	(1)	13.0	14.0
Other findings, not drug related	b	b	b	b	b	b	b	b
Not studied	--	4.0	0.8	2.0	2.7	(-)	0.4	0.8
Number	(415)	(50)	(263)	(50)	(37)	(13)	(23)	(851)

aCases too few for reliable percentages.

bNot asked.

TABLE 7.04b

External Examination: Postmortem Findings, by (Single) Drug Type

b. SURVEY 2

				Percent of Single Drug Cases					All
External Findings:	Nar-cotics	Anal-gesics	Barbi-turates	Seda-tives	Tran-quilizers	Stimu-lants	Anti-depres-sants	Misc. Drugs	Single Drug Cases
	%	%	%	(N)a	%	(N)a	(N)a	(N)a	%
Normal	12.0	45.2	59.1	(8)	22.6	(2)	(9)	(11)	30.3
Froth around nose or mouth	13.9	6.5	4.4	(2)	12.9	(2)	(-)	(-)	10.3
"Tracks" with recent hemorrhage	35.9	--	2.6	(1)	---	(3)	(1)	(3)	21.0
"Tracks" without recent hemorrhage	35.9	6.5	1.7	(1)	---	(2)	(3)	(1)	21.0
Pigmented scars	14.3	--	0.9	(-)	--	(-)	(-)	(1)	7.9
Tattoos	11.6	--	7.8	(-)	3.2	(-)	(1)	(-)	8.3
Atrophic scars	4.3	3.2	6.1	(-)	6.5	(-)	(1)	(1)	4.7
Scars in jugular area	0.7	--	--	(-)	3.2	(-)	(-)	(-)	0.6
Scars on wrists or forearm	16.2	3.2	9.6	(3)	22.6	(-)	(2)	(1)	13.5
Subcutaneous fibrosis	18.2	--	--	(-)	--	(-)	(-)	(-)	9.5
Starch or talc deposits	3.1	--	--	(-)	--	(1)	(-)	(-)	1.8
Subcutaneous abscesses	1.5	3.2	--	(-)	--	(-)	(-)	(1)	1.2
Jaundice	--	--	--	(-)	--	(-)	(-)	(-)	--
Cigarette burns	--	--	--	(-)	--	(-)	(-)	(-)	--
Bruises, abrasions or contusions	14.3	12.9	12.2	(1)	19.4	(2)	(1)	(1)	13.3
Other burns	0.4	--	--	(2)	--	(-)	(-)	(-)	0.6
Other trauma	12.7	3.2	5.2	(-)	12.9	(3)	(-)	(2)	9.9
Congestion	0.4	3.2	--	(1)	--	(-)	(-)	(-)	0.6
Edema	1.9	3.2	1.7	(1)	3.2	(-)	(-)	(-)	2.0
Gynecomastia	--	--	--	(-)	--	(-)	(1)	(-)	0.2
Other findings, drug-related	3.9	6.5	2.6	(1)	3.2	(-)	(-)	(1)	3.6
Other findings, not drug-related	4.3	9.7	4.4	(1)	16.1	(-)	(-)	(-)	5.3
Not studied	0.4	3.2	0.9	(1)	3.2	(-)	(-)	(-)	1.0
Number	(259)	(31)	(115)	(18)	(31)	(8)	(15)	(18)	(495)

aCases too few for reliable percentages.

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TABLE 7.05

The Musculoskeletal System: Postmortem Findings, by (Single) Drug Type, Surveys 1 and 2

Findings on the Musculo-skeletal system:	Percent of Single Drug Cases								All Single Drug Cases
	Narcotics	Analgesics	Barbiturates	Sedatives	Tranquilizers	Stimulants	Antidepressants	Misc. Drugs	
(SURVEY 1)	%	%	%	%	%	(N)a	%	b	%
Normal	79.5	90.0	78.3	86.0	84.0	(9)	91.0	b	80.5
Trauma	12.0	--	7.6	--	5.4	(4)	4.4	b	8.8
Congestion	c	c	c	c	c	c	c	b	c
Edema	c	c	c	c	c	c	c	b	c
Other findings, drug-related	0.2	2.0	--	--	--	(-)	--	b	0.2
Other findings, non-drug-related	2.4	4.0	3.8	2.0	--	(-)	--	b	2.7
Not studied	6.3	4.0	11.0	12.0	11.0	(-)	4.4	b	8.1
Number	(415)	(50)	(263)	(50)	(37)	(13)	(23)		(851)
(SURVEY 2)	%	%	%	(N)a	%	(N)a	(N)a	(N)a	%
Normal	80.3	77.4	64.4	(10)	54.8	(4)	(12)	(15)	73.5
Trauma	10.4	6.5	4.4	(1)	6.5	(-)	(-)	(2)	7.9
Congestion	0.4	--	--	(-)	(-)	(-)	(-)	(-)	0.2
Edema	--	--	0.9	(-)	(-)	(-)	(-)	(-)	0.2
Other findings, drug-related	3.1	3.3	3.5	(-)	(-)	(-)	(-)	(-)	0.2
Other findings, not drug-related	--	--	0.9	(-)	(-)	(-)	(-)	(-)	2.6
Not studied	6.7	12.9	26.1	(7)	38.7	(4)	(3)	(1)	15.8
Number	(259)	(31)	(115)	(18)	(31)	(8)	(15)	(18)	(495)

a Cases too few for reliable percentages.

b Not tabulated.

c Not asked.

TABLE 7.06

The Vascular System: Postmortem Findings, by (Single) Drug Type, Surveys 1 and 2

Findings on the Vascular System:	Percent of Single Drug Cases								All Single Drug Cases
	Nar-cotics	Anal-gesics	Barbi-turates	Seda-tives	Tran-quilizers	Stimu-lants	Anti-depres-sants	Misc. Drugs	
(SURVEY 1)	%	%	%	%	%	(N)[a]	%	b	%
Normal	69.4	74.0	55.1	62.0	68.0	(9)	78.0	b	65.0
Perivascular inflammation	1.4	--	--	--	--	(-)	--	b	0.7
Angiitis	--	--	--	--	--	(-)	--	b	--
Thrombosis	1.2	--	0.4	--	2.7	(-)	--	b	0.8
Sclerosis	6.3	8.0	10.0	16.0	5.4	(-)	4.4	b	8.0
Necrotizing angiitis	--	--	--	--	--	(-)	--	b	--
Emboli, pul-monary	c	c	c	c	c	c	c	c	c
Emboli,other	c	c	c	c	c	c	c	c	c
Other findings, re drug	2.2	2.0	1.1	--	--	(1)	--	b	1.6
Other findings, non-drug	8.0	2.0	4.6	--	5.4	(1)	8.7	b	6.0
Not studied	14.0	14.0	29.7	20.0	22.0	(3)	8.7	b	19.5
Number	(415)	(50)	(263)	(50)	(37)	(13)	(23)	b	(851)
(SURVEY 2)	%	%	%	(N)[a]	%	(N)[a]	(N)[a]	(N)[a]	%
Normal	71.0	67.7	54.8	(12)	54.8	(4)	(12)	(15)	66.3
Perivascular inflammation	0.4	--	--	(-)	--	(-)	(-)	(-)	0.2
Angiitis	--	--	--	(-)	--	(-)	(-)	(-)	--
Thrombosis	0.7	--	0.9	(-)	--	(-)	(-)	(-)	0.6
Sclerosis	23.2	12.9	31.3	(2)	12.9	(-)	(2)	(1)	22.0
Necrotizing angiitis	--	--	--	(-)	--	(-)	(-)	(-)	--
Emboli, pul-monary	0.4	--	0.9	(-)	--	(-)	(-)	(-)	0.4
Emboli, other	--	--	--	(-)	--	(-)	(-)	(-)	--
Other findings, re drug	0.4	--	--	(-)	--	(-)	(-)	(-)	0.4
Other findings, non-drug	4.6	6.5	0.9	(2)	--	(3)	(2)	(-)	4.2
Not studied	0.7	12.9	13.0	(2)	32.3	(1)	(-)	(-)	7.1
Number	(259)	(31)	(115)	(18)	(31)	(8)	(15)	(18)	(495)

[a]Cases too few for reliable percentages.
[b]Not tabulated.
[c]Not asked.

TABLE 7.07

The Heart: Postmortem Findings, by (Single) Drug Type, Surveys 1 and 2

Findings on the Heart:	Nar-cotics	Anal-gesics	Barbi-turates	Seda-tives	Tran-quilizers	Stimu-lants	Anti-depres-sants	Misc. Drugs	All Single Drug Cases
					Percent of Single Drug Cases				
(SURVEY 1)	%	%	%	%	%	(N)[a]	%	b	%
Normal	66.5	74.0	58.0	68.0	60.0	(8)	61.0	b	63.8
Right ventricular dilatation	11.0	4.0	13.0	6.0	19.0	(-)	4.4	b	11.0
Left ventricular dilatation	c	c	c	c	c	(c)	c	c	c
Endocarditis, right	--	--	--	--	--	(-)	--	b	--
Endocarditis, left	1.0	--	0.4	2.0	--	(-)	--	b	0.7
Trauma	2.2	--	1.9	--	--	(3)	--	b	2.0
Cor pulmonale	c	c	c	c	c	c	c	c	c
Congestion	c	c	c	c	c	c	c	c	c
Infarct	c	c	c	c	c	c	c	c	c
Cardiomegaly	c	c	c	c	c	c	c	c	c
Other findings, re drug	7.5	--	2.3	--	5.4	(2)	--	b	4.8
Other findings, non-drug	15.0	18.0	18.0	26.0	14.0	(1)	35.0	b	16.9
Not studied	2.4	4.0	11.0	6.0	11.0	(-)	4.4	b	5.6
Number	(415)	(50)	(263)	(50)	(37)	(13)	(23)	b	(851)
(SURVEY 2)	%	%	%	(N)[a]	%	(N)[a]	(N)[a]	(N)[a]	%
Normal	85.7	80.7	66.1	(14)	58.1	(6)	(14)	(10)	77.8
Right ventricular dilatation	1.2	--	1.7	(-)	--	(-)	(-)	(1)	1.2
Left ventricular dilatation	1.5	--	4.4	(-)	--	(-)	(-)	(1)	2.0
Endocarditis: sub-acute bacterial	1.5	--	--	(-)	--	(-)	(-)	(-)	0.8
Endocarditis: other	0.4	--	--	(-)	--	(-)	(1)	(-)	0.4
Trauma	3.1	--	--	(-)	--	(-)	(-)	(1)	1.8
Cor pulmonale	--	--	0.9	(-)	--	(-)	(-)	(2)	0.6
Congestion	2.3	--	2.6	(1)	--	(1)	(-)	(-)	2.2
Infarct	0.7	--	1.7	(-)	--	(-)	(1)	(-)	1.0
Cardiomegaly	1.9	3.2	7.0	(-)	---	(-)	(-)	(1)	3.0
Other findings, re drug	1.2	--	--	(-)	3.2	(-)	(-)	(-)	0.8
Other findings, non-drug	3.1	3.2	8.7	(1)	6.5	(-)	(-)	(1)	4.7
Not studied	0.8	12.9	13.0	(2)	32.3	(1)	(-)	(2)	7.3
Number	(259)	(31)	(115)	(18)	(31)	(8)	(15)	(18)	(495)

[a] Cases too few for reliable percentages.

[b] Not tabulated.

[c] Not asked.

TABLE 7.08a

The Respiratory System: Postmortem Findings, by (Single) Drug Type, Surveys 1 and 2

a. SURVEY 1

Findings on the respiratory system:	Percent of Single Drug Cases								All Single Drug Cases
	Narcotics	Analgesics	Barbiturates	Sedatives	Tranquilizers	Stimulants	Antidepressants	Misc. drugs	
	%	%	%	%	%	(N)[a]	%	b	%
Normal	8.7	26.0	12.0	14.0	14.0	(3)	22.0	b	11.8
Inflammation or perforation of nasal septum	--	--	--	--	2.7	(-)	--	b	0.1
Milk aspiration	0.2	--	0.4	--	--	(-)	--	b	0.2
Aspiration of gastric contents	5.3	6.0	3.0	8.0	5.4	(2)	13.0	b	5.2
Foam filling tracheobronchial tree	31.0	6.0	13.0	10.0	24.0	(1)	13.0	b	21.5
Acute pulmonary edema	56.4	50.0	46.8	42.0	60.0	(3)	39.0	b	51.4
Pneumonia (unspec.)	7.5	12.0	3.4	14.0	11.0	(-)	13.0	b	7.1
Tobacco staining	2.9	4.0	1.1	4.0	--	(1)	4.4	b	2.5
Lung abscess	--	--	--	2.0	--	(-)	--	b	0.1
Pleural effusion	1.9	--	--	--	--	(1)	4.4	b	1.2
Tuberculosis	--	--	--	--	--	(-)	--	b	--
Starch or talc deposits	1.2	--	--	--	--	(1)	--	b	0.7
Trauma	7.5	--	3.0	--	--	(2)	--	b	4.8
Congestion	c	c	c	c	c	c	c	c	c
Other findings, re drug	41.0	10.0	22.0	12.0	27.0	(4)	17.0	b	30.1
Other findings, non-drug	9.2	10.0	11.0	18.0	5.4	(1)	13.0	b	10.0
Not studied	2.4	4.0	11.0	6.0	11.0	(-)	4.4	b	5.6
Number	(415)	(50)	(263)	(50)	(37)	(13)	(23)	b	(851)

[a] Cases too few for reliable percentages.
[b] Not tabulated.
[c] Not asked.

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TABLE 7.08b

The Respiratory System: Postmortem Findings, by
(Single) Drug Type, Surveys 1 and 2

b. SURVEY 2

Findings on the respiratory system:	Percent of Single Drug Cases								
	Nar-cotics	Anal-gesics	Barbi-turates	Seda-tives	Tran-quilizers	Stimu-lants	Anti-depres-sants	Misc. drugs	All Single Drug Cases
	%	%	%	(N)[a]	%	(N)[a]	(N)[a]	(N)[a]	%
Normal	5.0	3.2	7.8	(1)	9.7	(-)	(1)	(-)	5.7
Inflammation or perforation of nasal septum	--	--	--	(-)	--	(-)	(-)	(-)	--
Milk aspiration	--	--	--	(-)	--	(-)	(-)	(-)	--
Aspiration of gastric contents	6.6	3.2	1.7	(2)	9.7	(-)	(-)	(1)	5.3
Foam filling tracheobronchial tree	30.5	19.4	13.0	(2)	19.4	(2)	(6)	(2)	23.8
Acute pulmonary edema	69.9	61.3	58.3	(10)	48.4	(6)	(10)	(5)	63.2
Pneumonia-broncho	7.7	6.5	3.5	(-)	6.5	(-)	(1)	(2)	6.3
Pneumonia-lobar	0.7	--	--	(-)	--	(-)	(-)	(-)	0.4
Tobacco-staining	1.2	3.2	6.1	(2)	3.2	(-)	(-)	(1)	3.0
Lung abscess	0.4	--	--	(-)	--	(-)	(-)	(-)	0.2
Pleural effusion	1.2	--	--	(-)	--	(-)	(-)	(-)	0.6
Tuberculosis	--	--	--	(-)	--	(-)	(-)	(-)	--
Starch or talc deposits	3.5	3.2	0.9	(-)	3.2	(1)	(-)	(1)	2.8
Trauma	5.4	--	1.7	(1)	--	(-)	(-)	(1)	3.6
Congestion	76.5	67.7	67.0	(9)	45.2	(7)	(12)	(10)	70.3
Other findings, re drug	3.9	--	2.6	(1)	--	(1)	(2)	(3)	4.0
Other findings, non-drug	8.1	6.5	5.2	(4)	9.7	(-)	(-)	(1)	7.5
Not studied	0.4	12.9	12.2	(2)	32.3	(1)	(-)	(1)	6.7
Number	(259)	(31)	(115)	(18)	(31)	(8)	(15)	(18)	(495)

[a]Cases too few for reliable percentages.

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TABLE 7.09

The Gastrointestinal System: Postmortem Findings, by (Single) Drug Type, Surveys 1 and 2

Findings on the gastro-intestinal system:	Nar-cotics	Anal-gesics	Barbi-turates	Seda-tives	Tran-quilizers	Stimu-lants	Anti-depres-sants	Misc. drugs	All Single Drug Cases
				Percent of Single Drug Cases					
(SURVEY 1)	%	%	%	%	%	(N)[a]	%	b	%
Normal	75.8	50.0	65.2	66.0	55.2	(10)	57.0	b	69.0
Pill or other drug-related residue	6.0	36.0	15.0	32.0	29.0	(1)	30.0	b	13.7
Hemorrhage	1.2	2.0	0.4	--	2.6	(-)	4.4	b	1.1
Gastritis	0.5	6.0	2.7	4.0	5.3	(1)	8.7	b	2.2
Peritonitis	0.5	--	--	--	--	(-)	--	b	0.2
Perforation	0.7	--	0.8	--	--	(-)	--	b	0.6
Corrosive effects	--	--	0.4	4.0	--	(-)	--	b	0.4
Trauma	2.4	--	0.8	--	--	(-)	--	b	1.5
Other [d]	14.0	--	7.6	--	7.9	(1)	8.7	b	10.7
Edema	c	c	c	c	c	c	c	c	c
Congestion	c	c	c	c	c	c	c	c	c
Adhesions	c	c	c	c	c	c	c	c	c
Other findings, re drug	c	c	c	c	c	c	c	c	c
Other findings, non-drug	c	c	c	c	c	c	c	c	c
Not studied	2.4	8.0	11.0	4.0	11.0	(-)	4.4	b	6.0
Number	(414)	(50)	(264)	(50)	(38)	(13)	(23)	b	(852)
(SURVEY 2)	%	%	%	(N)[a]	%	(N)[a]	(N)[a]	(N)[a]	%
Normal	82.6	32.3	40.9	(8)	29.0	(6)	(7)	(14)	63.6
Pill or other drug-related residue	6.2	41.9	32.2	(4)	25.8	(-)	(6)	(1)	17.2
Hemorrhage	2.7	3.2	7.0	(-)	9.7	(-)	(-)	(-)	3.8
Gastritis	0.4	--	2.6	(1)	3.2	(-)	(-)	(-)	1.2
Peritonitis	--	--	--	(-)	--	(-)	(-)	(-)	--
Perforation	0.4	--	--	(-)	--	(-)	(-)	(-)	0.2
Corrosive effects	0.4	3.2	4.4	(-)	--	(-)	(1)	(-)	1.6
Trauma	2.3	--	--	(-)	--	(-)	(-)	(-)	1.2
Other [d]	c	c	c	c	c	c	c	c	c
Edema	--	--	--	(-)	--	(-)	(-)	(-)	--
Congestion	3.1	9.7	14.8	(4)	6.5	(-)	(2)	(-)	7.3
Adhesions	0.4	--	--	(-)	--	(-)	(-)	(1)	0.4
Other findings, re drug	--	3.2	0.9	(1)	--	(-)	(-)	(1)	0.8
Other findings, non-drug	3.1	6.5	1.7	(-)	--	(1)	(-)	(-)	3.0
Not studied	0.4	9.7	12.2	(3)	32.3	(1)	(-)	(1)	6.7
Number	(259)	(31)	(115)	(18)	(31)	(8)	(15)	(18)	(495)

[a]Cases too few for reliable percentages.

[b]Not tabulated.

[c]Not asked.

[d]Other = Other findings, unknown whether drug-related or not.

TABLE 7.10a

The Liver: Postmortem Findings, by (Single) Drug Type, Surveys 1 and 2

a. SURVEY 1

Findings on the liver:	Nar-cotics	Anal-gesics	Barbi-turates	Seda-tives	Tran-quilizers	Stimu-lants	Anti-depres-sants	Misc. drugs	All Single Drug Cases
	%	%	%	%	%	(N)[a]	%	b	%
Normal	42.4	56.0	60.7	60.0	49.0	(7)	78.0	b	51.3
Hepatomegaly >2Kg	12.5	10.0	4.2	16.0	19.0	(2)	--	b	10.0
Chronic por-tal inflam-mation	2.9	--	1.2	--	2.7	(1)	4.4	b	2.1
Portal fibro-sis	0.7	2.0	--	--	--	(-)	8.7	b	0.7
Perivascular fibrosis	0.2	2.0	--	--	--	(-)	--	b	0.2
Perivascular deposits	c	c	c	c	c	c	c	c	c
Cirrhosis, Laennec's	c	c	c	c	c	c	c	c	c
Cirrhosis, post necrotic	0.5	2.0	--	0.4	2.7	(-)	4.4	b	0.7
Acute viral hepatitis	0.7	--	0.8	--	--	(-)	--	b	0.6
Granuloma formation	--	2.0	--	2.0	2.7	(-)	--	b	0.4
Nutritional fatty liver	8.9	12.0	7.3	6.0	16.0	(2)	17.0	b	9.1
Portal lympha-denopathy	17.0	--	--	2.0	5.4	(1)	--	b	8.6
Trauma	3.1	--	1.2	--	--	(3)	--	b	2.2
Starch or talc deposits	--	--	0.4	--	--	(-)	--	b	0.1
Congestion	c	c	c	c	c	c	c	c	c
Edema	c	c	c	c	c	c	c	c	c
Gallstones	c	c	c	c	c	c	c	c	c
Hemorrhage	c	c	c	c	c	c	c	c	c
Other findings, re drug	29.6	8.0	14.0	12.0	14.0	(-)	--	b	20.6
Other findings, non-drug	5.5	6.0	3.8	10.0	8.1	(2)	--	b	5.4
Not studied	2.1	6.0	11.0	4.0	11.0	(-)	4.4	b	5.5
Number	(415)	(50)	(262)	(50)	(37)	(13)	(23)	b	(850)

[a]Cases too few for reliable percentages.
[b]Not tabulated.
[c]Not asked.

TABLE 7.10b

The Liver: Postmortem Findings, by
(Single) Drug Type, Surveys 1 and 2

b. SURVEY 2

Findings on the liver:	Percent of Single Drug Cases								All Single Drug Cases
	Narcotics	Analgesics	Barbiturates	Sedatives	Tranquilizers	Stimulants	Antidepressants	Misc. drugs	
	%	%	%	(N)[a]	%	(N)[a]	(N)[a]	(N)[a]	%
Normal	34.4	48.4	50.4	(8)	29.0	(5)	(10)	(12)	41.6
Hepatomegaly >2Kg	17.0	12.9	5.2	(4)	9.7	(-)	(1)	(-)	12.5
Chronic portal inflammation	3.5	--	0.9	(-)	--	(-)	(1)	(-)	2.0
Portal fibrosis	1.9	--	--	(-)	--	(-)	(-)	(-)	1.0
Perivascular fibrosis	b	b	b	b	b	b	b	b	b
Perivascular deposits	--	--	--	(-)	--	(-)	(-)	(-)	--
Cirrhosis, Laennec's	2.3	--	1.7	(-)	--	(1)	(-)	(-)	1.8
Cirrhosis, post necrotic	0.4	--	--	(-)	--	(-)	(-)	(-)	0.2
Acute viral hepatitis	--	--	--	(-)	--	(-)	(-)	(-)	--
Granuloma formation	--	--	--	(-)	--	(-)	(-)	(-)	--
Nutritional fatty liver	16.6	6.5	6.1	(-)	12.9	(1)	(2)	(-)	11.9
Portal lymphadenopathy	13.1	--	--	(-)	--	(-)	(1)	(-)	7.1
Trauma	2.3	--	0.9	(1)	--	(-)	(-)	(-)	1.6
Starch or talc deposits	1.2	--	--	(-)	--	(-)	(-)	(-)	0.6
Congestion	38.6	32.3	21.7	(3)	19.4	(1)	(4)	(4)	30.9
Edema	--	--	0.9	(-)	--	(-)	(1)	(-)	0.4
Gallstones	0.4	6.5	0.9	(-)	--	(-)	(-)	(-)	0.8
Hemorrhage	--	--	--	(-)	--	(-)	(-)	(-)	--
Other findings, re drug	1.5	--	2.6	(-)	--	(-)	(-)	(1)	1.6
Other findings, non-drug	2.3	3.2	1.7	(1)	6.5	(-)	(1)	(-)	2.6
Not studied	0.4	9.7	13.0	(2)	32.3	(1)	(-)	(1)	6.7
Number	(259)	(31)	(115)	(18)	(31)	(8)	(15)	(18)	(495)

[a]Cases too few for reliable percentages.
[b]Not asked.

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TABLE 7.11

The Spleen: Postmortem Findings, by
(Single) Drug Type, Surveys 1 and 2

Findings on the spleen:	Percent of Single Drug Cases								All Single Drug Cases
	Nar-cotics	Anal-gesics	Barbi-turates	Seda-tives	Tran-quilizers	Stimu-lants	Anti-depres-sants	Misc. drugs	
(SURVEY 1)	%	%	%	%	%	(N)[a]	%	b	%
Normal	56.0	70.0	69.2	76.0	65.0	(13)	83.0	b	63.9
Splenomegaly >2gm	17.0	12.0	7.6	12.0	16.0	(-)	4.4	b	12.7
Prominent lymphoid tissue	3.6	--	--	--	2.7	(-)	--	b	1.9
Septic softening	0.5	--	--	2.0	--	(-)	--	b	0.4
Granulomata	0.2	--	--	--	--	(-)	4.4	b	0.2
Congestion	c	c	c	c	c	c	c	c	c
Edema	c	c	c	c	c	c	c	c	c
Hemorrhage	c	c	c	c	c	c	c	c	c
Trauma	c	c	c	c	c	c	c	c	c
Absent	c	c	c	c	c	c	c	c	c
Other findings, re-drug	26.5	4.0	12.0	8.0	14.0	(-)	4.4	b	18.1
Other findings, non-drug	3.1	8.0	2.3	2.0	--	(-)	--	b	2.8
Not studied	3.4	6.0	10.7	4.0	11.0	(-)	4.4	b	6.1
Number	(415)	(50)	(263)	(50)	(37)	(13)	(23)	b	(851)
(SURVEY 2)	%	%	%	(N)[a]	%	(N)[a]	(N)[a]	(N)[a]	%
Normal	55.2	58.1	66.1	(11)	38.7	(5)	(9)	(12)	57.8
Spenomegaly >2gm	20.5	6.5	6.1	(1)	6.5	(-)	(2)	(2)	13.9
Prominent lymphoid tissue	10.8	6.5	--	(-)	--	(-)	(1)	(2)	6.7
Septic softening	2.3	--	1.7	(-)	3.2	(-)	(-)	(-)	1.8
Granulomata	--	--	--	(-)	--	(-)	(-)	(-)	--
Congestion	20.1	19.4	12.2	(2)	16.1	(1)	(4)	(-)	17.0
Edema	--	--	0.9	(-)	--	(-)	(-)	(-)	0.2
Hemorrhage	--	--	--	(-)	3.2	(-)	(-)	(-)	0.2
Trauma	1.5	--	--	(1)	3.2	(-)	(-)	(-)	1.2
Absent	--	--	0.9	(-)	--	(1)	(-)	(1)	0.6
Other findings, re drug	1.5	--	--	(1)	--	(-)	(-)	(-)	1.0
Other findings, non-drug	2.3	3.2	0.9	(-)	--	(-)	(-)	(-)	1.6
Not studied	0.8	12.9	13.9	(2)	38.7)	(1)	(-)	(1)	7.7
Number	(259)	(31)	(115)	(18)	(31)	(8)	(15)	(18)	(495)

[a]Cases too few for reliable percentages.
[b]Not tabulated.
[c]Not asked.

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TABLE 7.12

The Lymph Nodes: Postmortem Findings, by
(Single) Drug Type, Surveys 1 and 2

Findings on the Lymph Nodes:	Percent of Single Drug Cases								All Single Drug Cases
	Nar-cotics	Anal-gesics	Barbi-turates	Seda-tives	Tran-quilizers	Stimu-lants	Anti-depres--sants	Misc. drugs	
(SURVEY 1)	%	%	%	%	%	(N)[a]	%	b	%
Normal	50.4	78.0	51.3	64.0	57.0	(8)	65.0	b	54.1
Peripheral lymphadeno-pathy	2.0	--	--	4.0	--	(-)	--	b	1.2
Thymus gland enlarged	1.0	--	--	--	--	(-)	--	b	0.5
Thymus gland not found	0.2	--	--	--	--	(1)	--	b	0.2
Hyperplasia	9.9	--	0.4	--	--	(1)	--	b	5.1
Inflammation	c	c	c	c	c	c	c	c	c
Localized lymphadenitis	c	c	c	c	c	c	c	c	c
Trauma	0.2	--	--	--	--	(-)	--	b	0.1
Other findings, re drug	3.6	--	0.4	--	--	(-)	--	b	1.9
Other findings, non-drug	2.2	4.0	1.9	--	--	(-)	4.4	b	2.0
Not studied	32.1	18.0	46.0	32.0	43.0	(3)	30.0	b	35.8
Number	(415)	(50)	(263)	(50)	(37)	(13)	(23)	b	(851)
(SURVEY 2)	%	%	%	(N)[a]	%	(N)[a]	(N)[a]	(N)[a]	%
Normal	83.0	74.2	73.0	(14)	48.4	(2)	(12)	(17)	77.2
Peripheral lymphadeno-pathy	1.9	3.2	0.9	(1)	3.2	(-)	(-)	(-)	1.8
Thymus gland enlarged	0.4	3.2	--	(-)	--	(-)	(-)	(-)	0.4
Thymus gland not found	--	--	--	(-)	--	(-)	(-)	(-)	--
Hyperplasia	5.0	--	--	(-)	--	(-)	(-)	(-)	2.6
Inflammation	--	--	--	(-)	--	(-)	(-)	(-)	--
Localized lymphadenitis		--	--	(-)	--	(-)	(-)	(-)	--
Trauma	c	c	c	c	c	c	c	c	c
Other findings, re drug	0.4	--	--	(-)	--	(-)	(-)	(-)	0.2
Other findings, non-drug	1.2	3.2	--	(-)	--	(-)	(-)	(-)	0.8
Not studied	8.1	19.4	26.1	(3)	48.4	(6)	(3)	(1)	17.2
Number	(259)	(31)	(115)	(18)	(31)	(8)	(15)	(18)	(495)

[a]Cases too few for reliable percentages.
[b]Not tabulated.
[c]Not asked.

TABLE 7.13

The Genitourinary System: Postmortem Findings, by
(Single) Drug Type, Surveys 1 and 2

Findings on Genito-urinary System:	Narcotics	Analgesics	Barbiturates	Sedatives	Tranquilizers	Stimulants	Antidepressants	Misc. drugs	All Single Drug Cases
(SURVEY 1)	%	%	%	%	%	(N)a	%	b	%
Normal	72.1	74.0	73.8	76.0	65.0	(12)	70.0	b	72.9
Pregnant	0.7	2.0	0.8	--	--	(-)	--	b	0.7
Reproductive organs missing	0.7	12.0	4.9	10.0	--	(-)	--	b	3.2
Congestion	c	c	c	c	c	c	c	c	c
Edema	c	c	c	c	c	c	c	c	c
Hemorrhage	c	c	c	c	c	c	c	c	c
Trauma	c	c	c	c	c	c	c	c	c
Stones	c	c	c	c	c	c	c	c	c
Adhesions	c	c	c	cc	c	c	c	c	c
Other findings, re drug	20.0	4.0	3.0	--	11.0	(-)	4.4	b	11.4
Other findings, non-drug	9.2	6.0	7.6	8.0	14.0	(1)	13.0	b	8.7
Not studied	2.2	4.0	11.0	6.0	11.0	(-)	4.4	b	5.6
Number	(415)	(50)	(263)	(50)	(37)	(13)	(23)	b	(851)
(SURVEY 2)	%	%	%	(N)a	%	(N)a	(N)a	(N)a	%
Normal	57.1	45.2	61.7	(13)	48.4	(5)	(8)	(8)	57.0
Pregnant	0.4	--	--	(1)	--	(-)	(-)	(-)	0.4
Reproductive organs missing	--	6.5	5.2	(-)	3.2	(-)	(1)	(2)	2.4
Congestion	35.5	22.6	12.2	(2)	12.9	(1)	(6)	(5)	26.5
Edema	0.4	--	--	(-)	--	(-)	(-)	(-)	0.2
Hemorrhage	--	--	--	(-)	--	(-)	(-)	(-)	--
Trauma	1.9	--	--	(-)	--	(-)	(-)	(1)	1.2
Stones	--	--	--	(-)	--	(-)	(-)	(-)	--
Adhesions	0.4	--	1.7	(-)	--	(-)	(-)	(-)	0.6
Other findings, re drug	1.2	3.2	0.9	(-)	--	(-)	(-)	(-)	1.0
Other findings, non-drug	4.3	19.4	10.4	(1)	3.2	(1)	(-)	(1)	6.7
Not studied	0.4	9.7	13.0	(2)	32.3	(1)	(-)	(1)	6.7
Number	(259)	(31)	(115)	(18)	(31)	(8)	(15)	(18)	(495)

aCases too few for reliable percentages.

bNot tabulated.

cNot asked.

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TABLE 7.14

The Endocrine System: Postmortem Findings, by
(Single) Drug Type, Surveys 1 and 2

Findings on the Endocrine System:	Nar-cotics	Anal-gesics	Barbi-turates	Seda-tives	Tran-quilizers	Stimu-lants	Anti-depres-sants	Misc. drugs	All Single Drug Cases
				Percent of Single Drug Cases					
(SURVEY 1)	%	%	%	%	%	(N)[a]	%	b	%
Normal	92.1	88.0	85.2	74.0	81.0	(12)	87.0	b	88.0
Congestion	c	c	c	c	c	c	c	c	c
Edema	c	c	c	c	c	c	c	c	c
Hemorrhage	c	c	c	c	c	c	c	c	c
Trauma	c	c	c	c	c	c	c	c	c
Other findings, re drug	1.7	--	0.4	--	--	(-)	--	b	0.9
Other findings, non-drug	1.9	2.0	0.8	8.0	5.4	(1)	8.7	b	2.4
Not studied	4.3	10.0	14.0	18.0	14.0	(-)	4.4		8.7
Number	(415)	(50)	(263)	(50)	(37)	(13)	(23)	b	(851)
(SURVEY 2)	%	%	%	(N)[a]	%	(N)[a]	(N)[a]	(N)[a]	%
Normal	95.0	83.9	85.2	(14)	61.3	(7)	(14)	(15)	88.7
Congestion	1.2	--	--	(-)	3.2	(-)	(1)	(-)	1.0
Edema	--	--	--	(-)	--	(-)	(-)	(-)	--
Hemorrhage	--	--	--	(-)	--	(-)	(-)	(-)	--
Trauma	0.4	--	--	(-)	--	(-)	(-)	(1)	0.4
Other findings, re drug	0.4	--	--	(-)	--	(-)	(-)	(-)	0.2
Other findings, non-drug	1.2	3.3	1.7	(-)	3.2	(-)	(-)	(1)	1.6
Not studied	1.9	12.9	13.0	(4)	32.3	(1)	(-)	(1)	8.1
Number	(259)	(31)	(115)	(18)	(31)	(8)	(15)	(18)	(495)

[a]Cases too few for reliable percentages.
[b]Not tabulated.
[c]Not asked.

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TABLE 7.15

The Nervous System: Postmortem Findings, by (Single) Drug Type, Surveys 1 and 2

Findings on the Nervous System:	Nar-cotics	Anal-gesics	Barbi-turates	Seda-tives	Tran-quilizers	Stimu-lants	Anti-depres-sants	Misc. drugs	All Single Drug Cases
					Percent of Single Drug Cases				
(SURVEY 1)	%	%	%	%	%	(N)[a]	%	b	%
Normal	66.3	70.0	60.5	70.0	78.0	(10)	78.0	b	65.9
Congestion	c	c	c	c	c	(-)	c	c	c
Edema	c	c	c	c	c	(-)	c	c	c
Cerebral atrophy	c	c	c	c	c	(-)	c	c	c
Hemorrhage	c	c	c	c	c	(-)	c	c	c
Trauma	c	c	c	c	c	(-)	c	c	c
Inflammation	c	c	c	c	c	(-)	c	c	c
Other findings, re drug	22.0	10.0	12.0	4.0	8.1	(1)	8.7	b	15.8
Other findings, non-drug	8.7	10.0	9.5	8.0	2.7	(2)	8.7	b	8.8
Not studied	3.6	10.0	18.0	18.0	11.0	(-)	4.4	b	9.5
Number	(415)	(50)	(263)	(50)	(37)	(13)	(23)	b	(851)
(SURVEY 2)	%	%	%	(N)[a]	%	(N)[a]	(N)[a]	(N)[a]	%
Normal	42.1	45.2	60.9	(9)	45.2	(6)	(6)	(15)	48.7
Congestion	35.1	32.3	11.3	(-)	12.9	(-)	(5)	(1)	25.1
Edema	20.5	12.9	10.4	(5)	12.9	(-)	(5)	(1)	17.0
Cerebral atrophy	0.4	--	2.6	(1)	--	(-)	(-)	(-)	1.0
Hemorrhage	0.8	--	2.6	(1)	3.2	(-)	(-)	(-)	1.4
Trauma	7.0	--	1.7	(1)	--	(1)	(-)	(-)	4.4
Inflammation	--	--	--	(-)	--	(-)	(-)	(-)	--
Other findings, re drug	3.5	--	0.9	(1)	--	(-)	(3)	(1)	3.0
Other findings, non-drug	3.5	6.5	1.7	(-)	6.5	(-)	(1)	(-)	3.2
Not studied	6.2	16.1	17.4	(2)	32.3	(1)	(-)	(2)	11.3
Number	(259)	(31)	(115	(18)	(31)	(8)	(15)	(18)	(495)

[a]Cases too few for reliable percentages.
[b]Not tabulated.
[c]Not asked.

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TABLE 7.16

Sex of Decedent: Postmortem Findings, by
(Single) Drug Type, Surveys 1 and 2

Sex of Decedent:		Percent of Single Drug Cases						
	Nar-cotics	Anal-gesics	Barbi-turates	Seda-tives	Tran-quilizers	Stimu-lants	Anti-depres-sants	All Single Drug Cases
(SURVEY 1)	%	%	%	%	%	(N)[a]	%	%
Male	82.9	30.0	49.8	40.0	56.8	(10)	30.4	64.4
Female	17.1	70.0	50.2	60.0	43.2	(3)	69.6	35.6
Number	(415)	(50)	(263)	(50)	(37)	(13)	(23)	(851)
(SURVEY 2)	%	%	%	%	%	(N)[a]	(N)[a]	%
Male	80.7	40.6	45.7	(7)	26.3	(7)	(8)	65.6
Female	19.3	59.4	54.3	(11)	43.8	(1)	(7)	34.4
Number	(259)	(32)	(116)	(18)	(32)	(8)	(15)	(480)

[a]Cases too few for reliable percentages.

TABLE 7.17

Age Distribution by (Single) Drug Type, Postmortem
Findings, Surveys 1 and 2

Age Ranges:		Percent of Single Drug Cases						
	Nar-cotics	Anal-gesics	Barbi-turates	Seda-tives	Tran-quilizers	Stimu-lants	Anti-depres-sants	All Single Drug Cases
(SURVEY 1)	%	%	%	%	%	(N)[a]	%	%
0 - 9 years	0.5	2.0	1.1	4.0	--	(-)	4.3	1.1
10 - 19 years	16.6	18.0	12.5	1.2	10.8	(-)	13.0	14.0
20 - 29 years	54.5	38.0	28.1	32.0	29.7	(12)	26.1	42.8
30 - 39 years	16.4	18.0	12.9	6.0	27.0	(-)	13.0	14.9
40 - 49 years	9.2	8.0	13.3	22.0	18.9	(1)	21.7	11.9
50 - 59 years	2.2	4.0	12.9	8.0	2.7	(-)	17.4	6.3
60 - 69 years	0.5	8.0	9.5	18.0	10.8	(-)	--	5.2
70 years or more	0.2	4.0	9.5	8.0	--	(-)	4.3	3.9
Number	(415)	(50)	(263)	(50)	(37)	(13)	(23)	(851)
(SURVEY 2)	%	%	%	(N)[a]	%	(N)[a]	(N)[a]	%
0 - 9 years	.0.4	3.1	--	(-)	--	(-)	(1)	0.6
10 - 19 years	10.0	15.6	4.3	(-)	6.3	(-)	(-)	7.9
20 - 29 years	64.9	31.3	28.5	(8)	40.6	(5)	(4)	50.2
30 - 39 years	18.2	18.8	12.1	(3)	18.8	(3)	(4)	17.3
40 - 49 years	4.6	12.5	12.9	(2)	15.6	(-)	(2)	8.3
50 - 59 years	1.9	6.3	12.9	(1)	12.5	(-)	(2)	6.0
60 - 69 years	--	12.5	8.6	(3)	6.3	(-)	(1)	4.2
70 years or more	--	--	20.7	(1)	--	(-)	(1)	5.4
Number	(259)	(32)	(116)	(18)	(32)	(8)	(15)	(480)

[a]Cases too few for reliable percentages.

Details of the Toxicological Examinations

SUMMARY

Separate, extensive analyses of toxicological examinations associated with the psychoactive drug-involved deaths were carried out in Survey 1 and Survey 2. Different approaches by the nine laboratories to the toxicological examination of biological fluids and tissues were evident in proportions of drugs quantitated, about 75 percent in both surveys. Drugs per case reported as tested ranged from a high of 3.5 to a low of 1.6 in Survey 1; the range was about the same in Survey 2.

The following psychoactive drugs were found to have a presumed fatal synergistic effect with ethanol and other drugs: morphine, propoxyphene, secobarbital, phenobarbital, amitriptyline, meprobamate, and the phenothiazines.

DETAILS OF THE TOXICOLOGICAL EXAMINATIONS

Analysis of Findings in Survey 1

Respondents in each office could choose one source of information on drugs from the following: lay informant, (drug) found at scene, physician, laboratory, or other. In table 8.01 it can be seen that for all cities the primary information source reported was the toxicology laboratory; the percent for all cities combined was 88.9. The laboratory was the reporting source for 72.8 percent of cases in San Francisco, the lowest, and 98.5 percent in Washington, D.C., the highest. Cleveland cited "lay informant" as the source of information for a high of 21.3 percent of its cases; Miami and San Francisco cited "found at scene" for highs of 13.8 percent and 19.1 percent respectively.

Another Survey 1 finding that showed variation by city was the average number of drugs involved per case. The average for the nine cities was 1.96 drugs per case, ranging from a low of 1.59 for San Francisco to a high of 2.54 for New York.

There were discrepancies between the numbers of drugs indicated on the medical examiners' reports and the numbers found in their separate laboratory reports. In Survey 1, for example, of the 3493 drugs which the medical examiners' reports cited, 3223 or 92.3 percent were actually reported on the separate laboratory forms. On

TABLE 8.01

Source of Information on Drugs and Number of Drugs Involved
in the Death, by City (Survey 1, N=2000)

Source of Information on Drugs:[a]	Chi-cago %	Cleve-land %	Dal-las %	Los Ang. %	Mi-ami %	New York %	Phila. %	San Fran. %	Wash. D. C. %	All Cities %
Lay informant	2.3	21.3	1.1	--	1.3	1.0	3.9	7.0	0.9	3.4
Found at scene	4.6	1.1	3.9	0.6	13.8	5.3	2.2	19.1	--	5.5
Physician	0.2	1.1	2.2	1.1	3.0	0.6	3.0	0.5	0.3	1.1
Laboratory	92.8	74.4	92.8	98.3	81.1	92.9	83.7	72.8	98.5	88.9
Other source	--	2.1	--	--	0.7	0.3	7.2	0.5	0.3	1.1
Total percent[b]	99.9	100.0	100.0	100.0	99.9	100.1	100.0	99.9	100.0	100.0
Number of cases	(295)	(150)	(100)	(300)	(151)	(405)	(199)	(250)	(150)	(2000)
Number of drugs in-volved	(474)	(281)	(180)	(541)	(297)	(1027)	(405)	(397)	(327)	(3929)
Average Number of drugs in-volved per case	1.61	1.87	1.80	1.80	1.97	2.54	2.03	1.59	2.18	1.96

[a] Listed in Part I of reporting form

[b] Because of rounding, all percentages may not add to precisely 100.0%.

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the other hand, the laboratory forms reported tests on more drugs than were listed in the medical examiners' reports. Of the 3909 tests made, 2945 were quantitated, traces or no drug were found in 159, and positive qualitative results were found in 805. This suggests that at least 3750 drugs were identified, 6.8 percent more than the number listed in the medical examiners' reports.

Table 8.02 lists the types of results reported by the laboratory from each city in Survey 1. Washington, D.C. quantitated 100 percent of drugs found, and three other cities, almost 100 percent. In contrast, New York quantitated only 33.8 percent of its drugs. The other cities were somewhere between these extremes.

Table 8.03 compiles the laboratory results in Survey 1 for five drugs, listing for each city the percentage of the total drugs tested and the percentage of the cases containing the drug. Large differences existed between cities. Methadone in New York and Washington represented 24.5 percent and 22.1 percent, respectively, of all drugs tested and was found in 59.8 percent of the cases for New York and 48.6 percent of the cases for Washington--very high percentages. Methadone was found in much smaller percentages in Philadelphia, Dallas, Miami, and San Francisco, in less than 1 percent in Los Angeles and Cleveland, and was not reported at all by Chicago.

Morphine was found in fairly high percentages in several cities, ranging from a low of 3.6 percent of all drugs tested for Miami to a high of 27.2 percent of all the drugs tested for Los Angeles. It was found in 48.3 percent and 43.1 percent of the cases for Los Angeles and Chicago, respectively, but in only 6.6 percent of the cases in Miami. Morphine, of course, is also the metabolite of heroin; thus, these cases could have been either morphine or heroin users.

Quinine, an adulterant of heroin, was not reported as tested for in four cities, including both Chicago and Los Angeles, the leaders in percentage of cases containing morphine. It was found in about 30 percent of the cases in New York, Washington, D.C., and Philadelphia. These northeastern seaboard cities seemed to observe a very high incidence of methadone, morphine or quinine cases--much more than the other cities reporting here.

Washington, D.C. alone among the nine cities submitted many cases involving phenmetrazine (Preludin) , 19 percent of their total. Washington, D.C. and Philadelphia showed the highest incidence of amphetamine-involved deaths. About fifteen percent of the cases reported from these two cities were found to involve amphetamine, whereas the average for the other cities was under two percent.

Table 8.04 lists in the first column the total percentages and numbers of drugs reported in various bodily tissues and fluids. The blood, urine, liver, bile, and stomach in all were assayed 93 percent at the time. The preferred location for most drug assays was blood. Phenothiazines, amphetamine, methamphetamine, and quinine were preferentially assayed in urine, while bile was the

TABLE 8.02

Types of Results of Drug Assays, by City (Survey 1, N=2000)

Type of Result:[a]	Chicago	Cleveland	Dallas	Los Ang.	Miami	New York	Phila.	San Fran.	Wash. D. C.	All Cities
	Percent of Cases									
	%	%	%	%	%	%	%	%	%	%
Zero (negative) or trace results	1.7	4.2	2.2	0.9	4.4	6.7	14.2	0.2	--	4.1
Qualitative results	--	26.1	2.2	0.2	17.1	59.5	24.4	--	--	20.6
Quantitative results	98.3	69.7	95.5	98.9	78.5	33.8	61.3	99.8	100.0	75.3
Total percent[b]	100.0	100.0	100.0	100.0	100.0	100.0	99.9	100.0	100.0	100.0
Number of drugs tested	(473)	(310)	(224)	(533)	(275)	(987)	(344)	(433)	(330)	(3909)
Average number of drugs quantitated per case	1.58	1.44	2.14	1.76	1.43	0.82	1.06	1.72	2.20	1.47
Average number of drugs tested per case	1.60	2.07	2.24	1.78	1.82	2.44	1.73	1.73	2.20	1.95
Number of cases	(295)	(150)	(100)	(300)	(151)	(405)	(199)	(250)	(150)	(2000)

[a] Findings reported in Part III of the reporting form.

[b] Because of rounding, not all percentages add to precisely 100.0%.

TABLE 8.03

Drug Assay Patterns for Five Drugs, by City (Survey 1, N=2000)

Type of drug found:[a]	Chi-cago %	Cleve-land %	Dal-las %	Los Ang. %	Mi-ami %	New York %	Phila. %	San Fran. %	Wash. D.C. %	All Cities %
Percent of all drugs tested										
Methadone	--	0.3	2.7	0.4	2.5	24.5	6.1	1.4	22.1	9.2
Morphine	26.8	9.6	6.3	27.2	3.6	9.4	14.2	18.0	13.6	15.1
Quinine	--	0.3	--	--	0.7	12.4	15.7	--	13.6	5.7
Phemetrazine	--	--	0.4	--	--	--	--	--	8.8	0.8
Amphetamine and methamphetamine	--	0.3	0.4	--	1.1	0.1	7.8	2.8	7.6	1.8
Others[b]	b	b	b	b	b	b	b	b	b	b
Total No. of drugs tested	(473)	(310)	(224)	(533)	(275)	(987)	(344)	(433)	(330)	(3909)
Percent of all cases										
	%	%	%	%	%	%	%	%	%	%
Methadone	--	0.7	6.0	0.7	4.6	59.8	10.6	2.4	48.6	17.9
Morphine	43.1	20.0	14.0	48.3	6.6	23.0	24.6	31.2	30.0	29.6
Quinine	--	0.7	--	--	1.3	30.1	28.6	--	30.0	11.2
Phenmetrazine	--	--	1.0	--	--	--	--	--	19.3	1.5
Amphetamine & phenmetrazine	--	0.7	1.0	--	2.0	0.2	13.6	4.8	16.7	3.5
Others[b]	b	b	b	b	b	b	b	b	b	b
Total No. of cases	(295)	(150)	(100)	(300)	(151)	(405)	(199)	(250)	(150)	(2000)

[a]Positive findings using either quantitative or qualitative tests; trace findings eliminated from caculations.

[b]Frequency or proportions of other drugs not included in this table.

Positive Toxicological Findings Quantitated for the Most
Commonly Found Drugs in Various Physiological Fluids
and Tissues (Survey 1, N=2000)

Fluids and Tissues	Positive Findings		Five most commonly occurring types of drugs in order of frequency	
	%	N		%
Blood	31.4	(3216)	Ethanol[a]	19.8
			Morphine	14.0
			Methadone	11.6
			Secobarbital	7.4
			Pentobarbital	5.6
Urine	18.8	(1928)	Morphine	24.7
			Methadone	18.8
			Quinine	10.1
			Ethanol[a]	6.3
			Propoxyphene	5.1
Bile	14.8	(1517)	Morphine	45.8
			Methadone	21.0
			Quinine	12.7
			Propoxyphene	4.5
			Amitriptyline	2.8
Liver	12.0	(1234)	Methadone	26.6
			Quinine	13.5
			Propoxyphene	6.4
			Secobarbital	5.8
			Pentobarbital	5.5
Lung	1.8	(185)	Methadone	35.1
			Quinine	14.6
			Phenmetrazine	13.0
			Propoxyphene	8.1
			Methamphetamine	7.5
Kidney	2.5	(258)	Methadone	27.5
			Quinine	11.2
			Phenmetrazine	9.7
			Propoxyphene	7.4
			Methamphetamine	6.6
Stomach	15.9	(1629)	Methadone	20.0
			Quinine	8.7
			Morphine	8.2
			Proproxyphene	6.9
			Secobarbital	6.9
Other	2.8	(291)	Methadone	25.0
			Quinine	15.9
			Ethanol[a]	10.0
			Phenmetrazine	7.9
			Secobarbital	5.5
Total	100.0	(10,258)		

[a]Ethanol defined as drug involved only when found in combination
with drug.

preferred location for morphine assays. The second column lists the five drugs most commonly found in each tissue or physiological fluid. Morphine was the most prominent drug in blood and in urine, followed by methadone. Methadone was quantitated most frequently in several tissues that were less often tested: liver, lung, kidney, and stomach.

Table 8.05 lists mean concentrations of the most commonly found drugs (representing more than 90 percent of the drugs reported). Column A of table 8.05 compiles the number of cases, the location studied, the mean concentration found, and the standard deviation for these drugs in Survey 1. It is worthwhile to compare this table with the listing of toxic doses in the work by Baselt, Wright and Cravey (1975). Though the number of cases cited is much lower than the number given in table 8.05, the concentrations listed are fairly close to these means. The large number of cases and the standard deviations presented in table 8.05 add immeasurably to the usefulness of the data, giving a range of presumed toxic levels.

Columns B and C of table 8.05 give analyses of those drugs for which data were available on both single drug cases and cases in which those same drugs were found in combination with alcohol. The table lists means, standard deviations? and the numbers of such cases. With the possible exception of diazepam, methadone, and glutethimide, all the other drugs show a higher toxic blood concentration when present alone than when they were present in combination with ethanol. Such apparent synergism involved not only barbiturates, as commonly assumed, but a great variety of other drugs, such as imipramine, amitriptyline, meprobamate, thioridazine, morphine in blood and bile, propoxyphene, and methaqualone. The decrease in toxic concentration was usually considerable, averaging around a factor of two. The three exceptions noted above might or might not exhibit these same characteristics in other analyses. Further testing should be done to test and refine this hypothesis.

The concentrations of drug in blood when present alone or in combination (columns B and C) did not seem to follow a consistent pattern. Some concentrations were found to be higher when present alone: for example, meprobamate, imipramine, salicylates, three barbiturates (pentobarbital, secobarbital, and phenobarbital), and methaqualone. Others, for example, amobarbital, methadone, amitriptyline, and diazepam were found to be lower in concentration when alone. Still others, for example, thioridazine, propoxyphene, and pentazocine, were virtually the same.

Survey 2 (1975)

The nine toxicology laboratories associated with the medical examiners' or coroners' offices tested a total of 2128 drugs, or 2.2 drugs per case, in Survey 2, as shown in table 8.06. The same percent of assays, 75 percent, was quantitative in both surveys. The proportion of qualitative results was twice as high in the earlier survey.

TABLE 8.05

Quantitative Assays of Most Commonly Found (Generic) Drugs, in Single-plus-Polydrug Cases, Single Drug Cases, and Single Drug-plus-Ethanol Cases: Number and Location, Mean Concentration, and SD (Survey 1, N=2000)

Generic Drug:	A. Single & Polydrug Cases			B. Single Drug Cases			C. Single Drug & Ethanol Cases		
	No. and location	Mean concentration mg/ml	SD	No. in blood	Mean concentration mg/ml	SD	No. in blood	Mean concentration mg/ml	SD
Meprobamate	17 bl.[a]	64	77	3	105	47	3	89	52
Thioridazine	11 bl.	5	3	5	5	2	1	3	--
Diazepam	67 bl.	18	80	3	5	3	5	5	7
Imipramine	16 bl.	8	9	6	11	13	1	2	--
Amitriptyline	18 li.	52	72	7	17	10	2	11	2
Amobarbital	95 bl.	35	133	6	16	28	--	--	--
Pentobarbital	151 bl.	20	19	56	25	20	29	19	19
Secobarbital	202 bl.	18	50	57	20	17	30	14	11
Phenobarbital	130 bl.	36	96	34	89	177	20	11	13
Methadone	99 bl.	34	155	33	3	6	11	55	180
Salicylates	39 bl.	525	1170	9	607	282	--	--	--
Propoxyphene	93 bl.	20	94	16	18	28	15	10	11
Pentazocine	7 bl.	14	13	3	16	15	--	--	--
Glutethimide	34 bl.	70	177	14	42	33	3	62	18
Methaqualone	39 bl.	14	18	3	113	136	3	57	60
Chloral hydrate	13 bl.	47	47						
Meperidine	9 bl.	8	13						
Morphine	271 bi.	54	256						
Methamphetamine	40 ur.	43	106						
Cocaine	2 bl.	399	555						
Quinine	16 bi.	2	1						
Ethanol	583 bl.	1375	1042						
Codeine	16 bi.	11	12						
Ethchlorvynol	37 bl.	47	49						
Barbiturate sedative[b]	47 bl.	33	76						
Chlorpromazine	7 li.	50	64						
Lidocaine	10 bl.	254	527						
Phenothiazine	2 ur.	52	39						
Chlordiazepoxide	21 bl.	7	10						
Flurazepam	8 bl.	13	30						
Phenmetrazine	22 ur.	24	44						
Diphenylhydantoin	9 bl.	45	43						

[a] bi = bile bl = blood li = liver ur = urine
[b] Unspecified

TABLE 8.06

Types of Results of Drug Assays, by City, Survey 2 (N=1004)

Type of result:	Chi-cago %	Cleve-land %	Dal-las %	Los Ang. %	Mi-ami %	New York %	Phila. %	San Fran. %	Wash. D.C. %	All Cities %
						Percent of Cases				
Zero (negative) results	--	0.7	28.0	36.6	0.1	0.8	--	--	0.7	10.8
Trace results	--	--	1.0	--	18.0	15.9	1.8	--	--	4.3
Qualitative results	--	32.9	1.4	--	5.0	28.0	21.5	--	1.4	10.1
Quantitative results	99.6	66.4	69.7	63.4	76.3	55.3	76.7	100.0	97.9	74.8
Total percent[a]	99.6	100.0	100.1	100.0	99.4	100.0	100.0	100.0	100.0	100.0
Number of drugs tested	(234)	(149)	(218)	(443)	(139)	(378)	(223)	(199)	(145)	(2128)
Average no. of drugs quantitated per case	1.8	1.4	2.5	2.0	1.3	0.9	1.7	1.9	1.9	1.6
Average no. of drugs tested per case	1.8	2.2	3.6	3.1	1.7	1.6	2.2	1.9	1.9	2.2
Number of cases	(128)	(69)	(61)	(144)	(80)	(240)	(103)	(104)	(75)	(1004)

[a]Because of rounding, not all percents add to precisely 100.0%.

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The patterns vary for results of toxicological examinations in the nine cities. Chicago, San Francisco, and Washington, D.C. quantitated almost all or nearly all of the drugs reported, consistent with their earlier results. Cleveland, New York, and Philadelphia reported relatively more qualitative findings, also consistent with the earlier survey. Patterns for Dallas and Los Angeles changed somewhat from the earlier to the later survey; in the later one they reported a fairly high proportion of negative results, 28.0 percent and 36.6 percent respectively. The average number of drugs quantitated or tested per case did not change appreciably.

Table 8.07 lists six drugs with positive toxicological findings (traces, qualitative or quantitative findings) as a function of location of laboratory. Methadone was detected in 52 percent of the cases reported by New York--more than three times the percentage of the next highest city. This pattern was seen also in the earlier survey. Philadelphia also repeated its pattern of higher proportions of tests occurring for methamphetamine and amphetamine drugs. Washington, D.C. again was the only city to report phenmetrazine. In that city it represented 27.0 percent of cases and 14.0 percent of tested drugs.

Table 8.08 provides numbers and proportions of drugs ranked first as cause of death, information which was not available in Survey 1. (Not all cases were able to be so ranked, of course.) It shows that, on the average, heroin was judged of primary importance as a cause of death in 87 percent of the cases where it was detected, the highest percentage reported. Methadone was ranked of primary importance very often also, in 82 percent of the cases where it was detected, The others in order were secobarbital, propoxyphene, pentobarbital, phenobarbital, and diazepam.

Table 8.09 shows the distribution of assays and the results for seven categories of tissue or fluid. Again, as in the earlier survey, blood tests were performed most frequently, and urine and bile tests somewhat less often. Among all of the 3960 drug assays, 65 percent were quantitative, 16 percent were qualitative, 7 percent showed traces, and 12 percent were negative (figure not shown).

Table 8.10 provides the percentages of positive toxicological findings for the ten most commonly assayed drugs in seven types of tissue or physiological fluid. Heroin/morphine assayed more often than others in blood, urine, and especially in bile. (Blood tests were the most commonly used.) Methadone was assayed more than the others in stomach contents and the liver. Very few assays were reported in brain or kidney.

Table 8.11, showing drugs most commonly found in Survey 2, represents more than 90 percent of the drugs reported. It lists the numbers and locations, the mean concentrations, and the minimum reported concentrations for single drug cases, single drug plus ethanol cases, and polydrug cases. Again, the higher concentrations of drugs found alone in contrast to combinations are evidence of synergistic effects in causing death. Morphine, propoxyphene, secobarbital, phenobarbital,

amitriptyline, phenothiazines and meprobamate again were found to be synergistic with ethanol and in polydrug cases. The drugs that did not show a synergistic effect with ethanol were methadone, diazepam, and pentobarbital. These same three drugs did not show synergism in the 1973-1974 data.

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TABLE 8.07

Drug Assay Patterns for Six Drugs, by City, Survey 2 (N=1004)

Type of drug found:[a]	Percent of all drugs tested									
	Chi-cago	Cleve-land	Dal-las	Los Ang.	Mi-ami	New York	Phila.	San Fran.	Wash. D.C.	All Cities
	%	%	%	%	%	%	%	%	%	%
Methadone	1.3	6.8	1.3	1.0	3.6	33.0	6.7	--	4.9	9.1
Morphine	33.0	18.0	1.9	23.0	14.0	17.0	12.0	20.0	28.0	20.0
Phenmetrazine	--	--	--	--	--	--	--	--	14.0	1.1
Methampheta-mine & amphet-amine	--	--	1.0	--	1.0	--	12.0	4.5	--	2.1
Diazepam	7.7	6.1	12.0	3.2	8.0	--	1.0	7.0	1.0	4.4
Propoxyphene	3.8	6.1	11.0	2.5	2.2	6.4	4.9	6.0	2.8	5.2
Others[b]	b	b	b	b	b	b	b	b	b	b
Total No. of drugs tested (including negative results)	(234)	(149)	(218)	(443)	(139)	(378)	(223)	(199)	(145)	(2128)
	Percent of all cases									
	%	%	%	%	%	%	%	%	%	%
Methadone	2.3	15.0	3.3	1.4	6.3	52.0	15.0	--	9.3	17.0
Morphine	59.4	39.0	4.9	45.0	24.0	27.0	26.0	38.0	55.0	36.0
Phenmetrazine	--	--	--	--	--	--	--	--	27.0	2.0
Methamphetamine & amphetamine	--	--	2.0	--	1.0	--	26.0	8.7	--	3.8
Diazepam	14.0	13.0	30.0	6.3	14.0	--	1.9	13.0	1.3	8.2
Propoxyphene	7.0	13.0	28.0	4.8	3.8	10.0	11.0	12.0	5.3	9.6
Others[b]	b	b	b	b	b	b	b	b	b	b
Total No. of cases	(128)	(69)	(61)	(144)	(80)	(240)	(103)	(104)	(75)	(1004)

[a]Tests resulting in either trace, qualitative or quantitative findings.
[b]Frequency or proportions of other drugs not included in this table.

TABLE 8.08

Proportions of Cases in Which Selected Drugs Were Detected and Ranked First as Cause of Death, All Cities[a], Survey 2 (N=1004)

Drugs Ranked First:	Percent of Cases in Which Each Drug was Detected	Percent of All Cases	
	%	%	No.
Heroin/morphine	87	33	(332)
Methadone	82	14	(139)
Propoxyphene	70	7	(69)
Secobarbital	74	6	(62)
Diazepam	25	2	(24)
Pentobarbital	64	4	(43)
Phenobarbital	38	2	(24)

[a]Cities not separately tabulated because numbers were too small for reliable percentages.

TABLE 8.09

Types of Findings of Drug Tests, by Type of Tissue or Fluid, All Drugs, All Cities, Survey 2 (N=1004)

Type of Finding:	Blood %	Urine %	Bile %	Liver %	Brain %	Kidney %	Stomach contents %	Other %
Negative	18.1	5.7	9.3	6.5	11.6	3.6	7.3	8.3
Traces	3.4	8.0	11.6	7.6	9.3	5.5	9.8	6.9
Qualitative	5.0	29.9	29.6	16.4	--	--	32.2	16.7
Quantitative	73.5	56.3	49.5	69.5	79.1	90.9	50.7	67.6
Total percent	100.0	99.9	100.0	100.0	100.0	100.0	100.0	99.5
Total Number	(1689)	(662)	(622)	(341)	(43)	(55)	(531)	(102)

Header: Percent of Tests Conducted

TABLE 8.10

Positive Toxicological Findings for Ten Commonly Assayed Drugs, by Various Fluids and Tissues, All Cities, Survey 2 (N=1004)

Type of Drug:[a]	Blood %	Urine %	Bile %	Liver %	Brain %	Kidney %	Stomach Contents %	Other %
Heroin/morphine	20.5	35.0	67.6	3.8	--	4.0	0.4	32.5
Methadone	18.1	31.2	16.7	25.7	21.7	24.0	33.8	17.5
Propoxyphene	12.2	11.5	7.1	23.1	21.7	24.0	17.7	12.5
Secobarbital	12.2	6.8	0.4	10.4	26.2	16.0	15.9	2.5
Diazepam	11.9	0.6	0.7	3.8	8.7	8.0	3.5	15.0
Pentobarbital	9.3	2.9	0.2	10.9	21.7	24.0	12.7	10.0
Phenobarbital	9.0	4.0	--	4.9	---	--	3.9	5.0
Amitriptyline	4.1	1.7	2.3	10.4	--	--	7.1	5.0
Codeine	2.3	3.7	3.4	--	--	--	1.1	--
Phenothiazine	0.4	2.6	1.6	7.1	---	--	3.9	--
Total percent	100.0	100.0	100.0	100.1	100.0	100.0	100.0	100.0
Number of assays of ten drugs	(657)	(349)	(438)	(183)	(23)	(25)	(283)	(40)
Total number of assays	(1384)	(624)	(564)	(319)	(38)	(53)	(492)	(93)

Header: Percent of Findings in Assays

[a] Tests resulting in either trace, qualitative, or quantitative results.

TABLE 8.11

Quantitative Assays of Most Commonly Found (Generic) Drugs, in Single Drug Cases, Single Drug-plus-Ethanol Cases and Polydrug Cases: Number and Location, Mean Concentration and Range

	A.			B.			C.		
	Single Drug Cases			Single Drug + Ethanol Cases			Polydrug Cases		
Generic Drugs:	No. & Location	Concentration (µg/ml)		No. & Location	Concentration (µg/ml)		No. & Location	Concentration (µg/ml)	
		Mean	Min - Max Range		Mean	Min - Max Range		Mean	Min - Max Range
Heroin/morphine	56 bi.[a]	45.8	0.6 - 300.	92 bi.[a]	35.	0.2 - 228.	35 bi.[a]	32.	0.3 - 160.
Methadone	63 bi.	0.84	0.1 - 3.3	12 bl.	1.0	0.2 - 3.	18 bl.	0.98	0.1 - 6.7
Propoxphene	16 li.	196.	3. - 600.	16 bl.	3.5	0.06 - 14.	24 bl.	7.8	0.1 - 52.
Secobarbital	25 bl.	21.	4. - 59.	12 bl.	9.2	7. - 33.	25 bl.	14.1	0.04 - 43.
Diazepam	6 bl.	2.9	1.3 - 7.7	4 bl.	8.0	0.5 - 25.	48 bl.	2.0	0.1 - 6.1
Pentobarbital	21 bl.	36.	11. - 62.	6 bl.	61.	2.6 - 180.	20 bl.	25.	0.1 - 87.
Phenobarbital	12 bl.	67.	2.6 - 173.	8 bl.	51.	2.6 - 246.	21 bl.	25.	0.04 - 124.
Amitriptyline	10 li.	73.	0.6 - 160.	2 bl.	6.6	3.8 - 9.4	5 bl.	22.	0.4 - 99.
Meprobamate	3 bl.	105.	2. - 240.	1 bl.	49.	--	8 bl.	93.	18. - 291.
Ethchlorvynol	6 bl.	52.	11. - 118.	1 bl.	45.	--	12 bl.	41.	6.3 - 129.
Phenothiazines	6 li.	60.	0.1 - 145.	1 bl.	41.	--	3 li.	86.	31. - 179.
Phenmetrazine	1 bl.	0.8	--	3 ur.	13.	0.8 - 30.	9 ur.	14.	3. - 40.
Glutethimide	3 bl.	24.	23. - 26.	--	--	--	15 bl.	25.	1.8 - 140.
Salicylate	2 bl.	867.	533. - 1200.	--	--	--	5 bl.	192.	100. - 322.
Amphetamine	1 li.	35.	--	--	--	--	9 ur.	14.3	0.2 - 60.
Methamphetamine	1 bl.	0.37	--	--	--	--	8 ur.	97.5	0.9 - 710.
Amobarbital	1 bl.	24.	--	--	--	--	13 bl.	15.	4. - 52.
Cocaine	1 bl.	6.9	--	--	--	--	2 bl.	5.9	4.8 - 7.
Codeine	--	--	--	1 bl.	0.4	--	6 bi.	28.	3. - 82.
Chlordiazepoxide	--	--	--	5 bl.	9.4	0.7 - 34.	5 bl.	4.1	0.8 - 11.
Flurazepam	--	--	--	--	--	--	6 bl.	2.4	0.1 - 10.

[a] bi. = bile   bl. = blood   li. = liver   ur. = urine

Chapter 9

Sociodemographic Characteristics of Cases

SUMMARY

Differences in age, sex, race, marital status, employment status, and occupation were examined for the predominant drug categories, overall and for each of the nine cities. Data from the two surveys were combined, since differences between them were not significant. Age was generally lower for the narcotic than for the non-narcotic deaths; barbiturate cases on the average were somewhat older. Males and blacks predominated in the narcotic category compared with the other drugs. In certain cities these patterns did not hold; in Los Angeles, for example, whites predominated among narcotic cases. More of the narcotic cases were single (never married) than were the other cases. Surprisingly, the majority in all drug categories were employed, though occupations tended to be semiskilled and unskilled, especially in the narcotic category.

SOCIODEMOGRAPHIC CHARACTERISTICS OF CASES

The social and demographic characteristics of all the cases selected as "drug involved" make it possible to reconstruct the lives of these individuals before the final act. Their age, sex, race, marital status, employment status and occupation are tabulated by drug category (the most significant drug involved in the death) and by city.

Drug categories used are the five with highest overall frequency of occurrence: narcotics, analgesics, barbiturates, (other) sedatives, and tranquilizers. A sixth category of "others" was added to account for classes of drugs with very small frequencies that could not be separately analyzed. Ethanol was classed in the "others" category when considered the most significant substance involved in the death and found with one or more other drugs, even though the number of cases was considerable in some cities. The occurrence of deaths attributed to drugs in the "others" category, shown in table 9.01, was tabulated by city to show where certain drug types might have clustered. There does not appear to be a pattern among the cities, nor among the three drug classes tabulated, except that marijuana occurrences were virtually absent.

Data from Surveys 1 and 2 were combined in this analysis to provide larger numbers. Before the samples were combined, the distributions

of age, sex, and race between the two samples were compared by chi square test for each city and for the three major drug categories (narcotics, analgesics, and barbiturates). There were no significant differences between samples for any of these drug categories in any of the nine cities (table not shown).

As background to the analysis, a tabulation of drug category by city is provided. Table 9.02 shows that narcotics were the most frequent drug correlate of death in six of the nine cities, ranging from 25.9 percent of cases in Cleveland to 72.6 percent in New York City, with Washington, D.C. the second highest at 66.2 percent. In Dallas, Miami and San Francisco, barbiturate cases were more frequent than any others.

Age correlates varied according to the drug category involved (table 9.03). Among narcotic deaths the age distribution clustered in the 20-30 range for most of the cities, with San Francisco, Los Angeles and Washington, D.C., showing a somewhat more expanded range of 20-40. The ages among barbiturate deaths were more evenly distributed. Miami and Washington, D.C. were exceptions: More than half of their barbiturate deaths were age 50 or over. In general, the narcotic death cases were younger than those for whom barbiturates played the dominant role in death.

Sex distribution, again, varied by drug category (table 9.04). In each of the cities the narcotic category was dominated by male cases, ranging from 69.4 percent to 86.8 percent. Among barbiturate deaths the ratio was more balanced, with male cases ranging between 40 and 60 percent for most of the nine cities.

The categories of race tabulated were white, black, and all other races (table 9.05). (The last combined category was necessitated by the small numbers of cases available.) In all cities except Los Angeles, Miami, and San Francisco, blacks were a larger proportion than whites in the narcotic drug category; in Washington, 96.0 percent. Whites predominated in all other drug categories, with minor exceptions. In Washington, blacks also predominated in the analgesic category.

In all but one city, more narcotic victims than victims of other drugs had never married. In other drug categories, the distribution varied without a discernible pattern. (table 9.06). Undoubtedly, some of the variation in marital status was due to the age distribution in each category, with younger victims more likely never to have been married.

Findings on employment (tables 9.07 and 9.08) suggest that occupations were not particularly stable or well-paying. Among those employed, the majority were either semiskilled or unskilled, and more of the narcotic cases tended to be unskilled. Very few were listed as professional or semiprofessional. In some cities the sedative and barbiturate cases included proportionately more **oc**cupations at the higher end of the scale, This may be the influence of age or possibly reflects the occurrence of suicides by drugs

among middle-class persons; also, most physician addict cases pro-
bably would have fallen into this group.

The majority of drug-involved death cases were persons employed at
time of death, even among the narcotic group. Figures for all
drugs combined ranged from 81.8 percent in San Francisco to 22.3
percent in Philadelphia. Housewives were found more often in the
non-narcotic drug categories. This is consistent with findings re-
ported above on sex and age differences.

TABLE 9.01

Classes of Drugs Categorized as "Other,"
by City, Surveys 1 and 2

Drug Categorized as "Other":	Percent of cases								
	Chi-cago	Cleve-land	Dal-las	Los Ang.	Mi-ami	New York	Phila.	San Fran.	Wash. D.C.
(SURVEY 1)	%	%	%	%	%	%	%	%	%
Psycho-stimulants	--	--	2.2	--	2.8	0.6	4.6	2.5	0.6
Anti-depres-sants	1.1	3.7	8.6	2.8	3.5	3.2	2.0	2.1	1.3
Marijuana & psychedelics	--	--	--	--	--	--	0.7	--	--
Ethanol[a]	1.1	19.1	5.4	0.7	--	8.9	9.1	2.9	1.3
Miscellaneous	2.2	3.7	7.5	0.7	5.5	4.1	9.7	2.1	--
Total "Others"	4.4	26.5	23.7	4.2	11.7	16.9	26.0	9.6	3.3
Total No. of Survey 1 cases	(274)	(136)	(93)	(285)	(145)	(315)	(154)	(239)	(151)
(SURVEY 2)									
Psycho-stimulants	--	--	--	--	3.8	0.4	1.0	3.9	6.7
Anti-depres-sants	--	1.5	4.9	4.2	2.5	2.5	1.0	3.9	4.0
Marijuana & psychedelics	--	--	--	--	--	--	1.0	--	--
Ethanol[a]	9.4	15.9	3.3	6.9	1.3	1.3	4.9	--	--
Miscellaneous	1.6	4.4	21.3	1.4	--	--	2.9	--	--
Total "Others"	10.9	21.7	29.5	12.5	7.5	4.2	10.7	7.7	10.7
Total No. of Survey 2 cases	(129)	(69)	(61)	(142)	(80)	(239)	(103)	(103)	(74)

[a]Ethanol reported only when in combination with other drug(s).

TABLE 9.02

Class of Drug Involved in Death, by City, Surveys 1 and 2 Combined

Drug class involved in death:[a]	Percent of Cases									
	Chi-cago %	Cleve-land %	Dal-las %	Los Ang. %	Mi-ami- %	New York %	Phila. %	San Fran. %	Wash. D.C. %	All Cities %
Narcotics	48.9	25.9	11.0	46.6	16.0	72.6	46.7	32.6	66.2	46.0
Analgesics	3.7	15.1	21.4	3.7	8.0	5.8	8.6	7.6	8.9	7.6
Barbiturates	31.5	16.6	26.6	33.7	34.7	7.4	13.2	38.5	15.6	23.8
Sedatives	3.7	8.8	8.4	4.0	20.9	0.2	7.0	4.4	1.3	5.3
Tranquilizers	5.7	8.8	6.5	4.9	10.2	2.7	4.7	7.9	2.2	5.5
Others	6.5	24.9	26.0	7.0	10.2	11.4	19.8	9.1	5.8	11.7
Total percent	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number	(403)	(205)	(154)	(427)	(225)	(554)	(257)	(343)	(225)	(2793)

[a]Drug judged to be most significantly involved in death.

TABLE 9.03

Age Distribution and Class of Drug Involved in Death,
by City, Surveys 1 and 2 Combined

Age and class of drug:	Chi-cago	Cleve-land	Dal-las	Los Ang.	Mi-ami	New York	Phila.	San Fran.	Wash. D.C.
	Percent of cases								
	%	%	(N)a	%	%	%	%	%	%
Narcotics:									
0-19 yr.	13.7	1.9	(3)	9.0	16.7	11.4	12.5	6.3	8.7
20-24 yr.	41.6	35.8	(3)	32.2	38.9	35.3	30.0	23.2	40.3
25-29 yr.	22.8	37.7	(5)	22.1	30.6	24.6	22.5	24.1	16.8
30-39 yr.	14.3	15.1	(3)	24.6	11.1	17.2	20.8	27.7	22.8
40-49 yr.	6.6	7.5	(3)	10.1	--	8.7	12.5	9.8	9.4
50+ yr.	1.0	1.9	(-)	2.0	2.7	2.7	1.7	8.9	2.0
(Number)b	(197)	(53)	(17)	(199)	(36)	(402)	(120)	(112)	(149)
	(N)a	%	%	(N)a	(N)a	%	%	%	%
Analgesics:									
0-19 yr.	(5)	19.4	12.1	(2)	(1)	6.3	18.2	7.7	10.0
20-24 yr.	(2)	16.1	12.1	(1)	(3)	12.5	18.2	15.3	30.0
25-29 yr.	(2)	19.4	15.2	(6)	(-)	21.9	18.2	7.7	15.0
30-39 yr.	(4)	16.1	18.2	(3)	(4)	31.3	22.7	23.1	20.0
40-49 yr.	(1)	16.1	15.2	(2)	(3)	12.5	18.2	23.1	10.0
50+ yr.	(1)	12.9	27.2	(2)	(7)	15.6	4.5	23.1	15.0
(Number)b	(15)	(31)	(33)	(16)	(18)	(32)	(22)	(26)	(20)
	%	%	%	%	%	%	%	%	%
Barbiturates:									
0-19 yr.	19.7	5.9	14.6	7.0	3.8	17.1	8.8	2.3	--
20-24 yr.	23.6	23.5	14.6	10.4	12.8	17.1	20.6	9.8	5.7
25-29 yr.	14.2	5.9	12.2	14.6	12.8	19.5	29.4	15.2	5.7
30-39 yr.	15.0	11.8	12.2	13.2	7.7	17.1	8.8	14.4	22.9
40-49 yr.	11.0	14.7	14.6	19.4	11.6	9.7	8.8	18.9	14.3
50+ yr.	16.5	38.2	31.8	35.4	51.3	19.5	23.5	39.4	51.4
(Number)b	(127)	(34)	(41)	(144)	(78)	(41)	(34)	(132)	(35)
	(N)a	(N)a	(N)a	(N)a	%	(N)a	(N)a	(N)a	(N)a
Sedatives:									
0-19 yr.	(2)	(-)	(1)	(-)	2.1	(-)	(1)	(-)	(-)
20-24 yr.	(5)	(-)	(1)	(2)	19.1	(-)	(4)	(3)	(-)
25-29 yr.	(3)	(3)	(2)	(1)	17.0	(-)	(5)	(3)	(-)
30-39 yr.	(2)	(2)	(2)	(4)	14.9	(1)	(2)	(2)	(1)
40-49 yr.	(1)	(6)	(5)	(3)	8.5	(-)	(1)	(2)	(1)
50+ yr.	(2)	(7)	(2)	(7)	38.3	(-)	(5)	(5)	(1)
(Number)b	(15)	(18)	(13)	(17)	(47)	(1)	(18)	(15)	(3)

(Continued)

TABLE 9.03 continued

Age and class of drug:	Chi-ago	Cleve-land	Dal-las	Los Ang.	Mi-ami	New York	Phila.	San Fran.	Wash. D.C.
	%	(N)[a]	(N)[a]	%	%	(N)[a]	(N)[a]	%	(N)[a]
Tranquil- izers:									
0-19 yr.	8.7	(3)	(-)	--	4.3	(2)	(-)	--	(-)
20-24 yr.	43.5	(4)	(-)	9.5	4.3	(2)	(1)	3.7	(1)
25-29 yr.	8.7	(-)	(1)	9.5	17.4	(5)	(2)	29.6	(-)
30-39 yr.	8.7	(4)	(5)	33.3	17.4	(6)	(4)	14.8	(4)
40-49 yr.	8.7	(2)	(1)	33.3	30.4	(-)	(3)	29.6	(-)
50+ yr.	21.7	(5)	(3)	14.3	26.1	(-)	(2)	22.2	(-)
(Number)[b]	(23)	(18)	(10)	(21)	(23)	(15)	(12)	(27)	(5)
	%	%	%	%	%	%	%	%	(N)[a]
Others:									
0-19 yr.	11.5	13.7	27.5	3.3	--	11.1	11.8	6.4	(-)
20-24 yr.	30.8	7.8	15.0	16.7	17.4	27.0	39.2	12.9	(4)
25-29 yr.	7.8	5.9	17.5	6.7	34.8	14.3	21.6	22.6	(2)
30-39 yr.	11.5	15.7	15.0	33.3	17.4	28.6	15.7	16.1	(1)
40-49 yr.	19.2	35.3	17.5	16.7	4.3	14.3	9.8	22.6	(3)
50+ yr.	19.2	21.6	7.5	23.3	26.1	4.8	2.0	19.4	(3)
(Number)[b]	(26)	(51)	(40)	(30)	(23)	(63)	(51)	(31)	(13)
	%	%	%	%	%	%	%	%	%
All drugs:									
0-19 yr.	15.9	9.3	16.2	7.3	5.3	11.6	11.3	4.1	6.7
20-24 yr.	34.0	19.5	13.0	20.8	18.2	31.0	28.0	14.9	32.4
25-29 yr.	17.9	16.6	16.2	17.8	18.2	23.1	23.0	19.5	14.2
30-39 yr.	14.4	15.1	17.5	21.5	12.8	20.0	18.3	19.5	23.1
40-49 yr.	8.9	19.5	17.5	15.2	10.7	9.4	12.1	17.2	11.1
50+ yr.	8.9	20.0	19.5	17.3	34.7	4.9	7.3	24.8	12.5
(Number)[c]	(403)	(205)	(154)	(427)	(225)	(554)	(257)	(343)	(225)

[a] Cases too few for reliable percentages.

[b] Base for computation in each drug class or [c] in combined classes. Percents in every case add to 100.0%.

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TABLE 9.04

Sex and Class of Drug Involved in Death,
by City, Surveys 1 and 2 Combined

Class of Drug:		Percent of Cases Male							
	Chi-cago	Cleve-land	Dal-las	Los-Ang.	Mi-ami	New York	Phila.	San Fran.	Wash. D.C.
Narcotics	80.7%	86.8%	$(15)^a$	78.4%	69.4%	80.1%	84.2%	75.0%	82.6%
(Number)^b	(197)	(53)	(17)	(199)	(36)	(402)	(120)	(112)	(149)
Analgesics	$(8)^a$	54.8%	27.3%	$(8)^a$	$(3)^a$	46.9%	72.7%	50.0%	45.0%
(Number)^b	(15)	(31)	(33)	(16)	(18)	(32)	(22)	(26)	(20)
Barbitu-rates	64.4%	23.5%	53.7%	41.0%	50.0%	48.8%	58.8%	50.0%	42.9%
(Number)^b	(127)	(34)	(41)	(144)	(78)	(41)	(34)	(132)	(35)
Sedatives	$(5)^a$	$(2)^a$	$(9)^a$	$(9)^a$	42.6%	$(1)^a$	$(12)^a$	$(12)^a$	$(-)^a$
(Number)^b	(15)	(18)	(13)	(17)	(47)	(1)	(18)	(15)	(3)
Tranquil-izers	65.2%	$(7)^a$	$(4)^a$	47.6%	43.5%	$(10)^a$	$(6)^a$	48.1%	$(2)^a$
(Number)^b	(23)	(18)	(10)	(21)	(23)	(15)	(12)	(27)	(5)
Others	57.7%	52.9%	62.5%	46.7%	65.2%	61.9%	88.2%	58.1%	$(11)^a$
(Number)^b	(26)	(51)	(40)	(30)	(23)	(63)	(51)	(31)	(13)
All drugs	70.7%	52.2%	54.5%	60.0%	49.8%	73.5%	77.8%	60.1%	71.1%
(Number)^c	(403)	(205)	(154)	(427)	(225)	(554)	(257)	(343)	(225)

^{a}Cases too few for reliable percentages.
^{b}Base for computation in each drug class or ^{c} in combined classes. Percents in every case add to 100.0%

TABLE 9.05

Race and Class of Drug Involved in Death, by City, Surveys 1 and 2 Combined

White & black race[a], by class of drug:	Chicago	Cleveland	Dallas	Los Ang.	Miami	New York	Phila.	San Fran.	Wash. D.C.
	%	%	b	%	%	%	%	%	%
Narcotics									
White	35.0	39.6	(5)	41.2	66.7	29.1	21.7	62.5	4.0
Black	60.4	60.4	(10)	27.6	30.6	55.5	78.3	30.4	96.0
(Number)[c]	(197)	(53)	(17)	(199)	(36)	(402)	(120)	(112)	(149)
	b	%	%	b	b	%	%	%	%
Analgesics									
White	(6)	61.3	87.9	(12)	(16)	50.0	59.1	69.2	35.0
Black	(7)	35.5	12.1	(3)	(2)	28.1	36.4	23.1	65.0
(Number)[c]	(15)	(31)	(33)	(16)	(18)	(32)	(22)	(26)	(20)
	%	%	%	%	%	%	%	%	%
Barbiturates									
White	70.1	94.2	87.8	74.3	93.6	75.6	79.4	89.4	85.7
Black	29.9	2.9	9.8	18.1	3.8	19.5	17.6	3.8	11.4
(Number)[c]	(127)	(34)	(41)	(144)	(78)	(41)	(34)	(132)	(35)
	b	b	b	b	%	b	b	b	b
Sedatives									
White	(11)	(17)	(13)	(13)	93.6	(-)	(17)	(10)	(3)
Black	(3)	(1)	(-)	(3)	2.1	(-)	(1)	(2)	(-)
(Number)[c]	(15)	(18)	(13)	(17)	(47)	(1)	(18)	(15)	(3)
	%	b	b	%	%	b	b	%	b
Tranquilizers									
White	73.9	(15)	(9)	81.0	95.7	(9)	(11)	96.3	(2)
Black	17.4	(3)	(-)	9.5	--	(2)	(-)	3.7	(3)
(Number)[c]	(23)	(18)	(10)	(21)	(23)	(15)	(12)	(27)	(5)
	%	%	%	%	%	%	%	%	b
Others									
White	53.8	66.7	72.5	66.7	60.9	30.2	27.5	77.4	(2)
Black	28.5	33.3	27.5	16.7	26.1	54.0	72.5	16.1	(10)
(Number)[d]	(26)	(51)	(40)	(30)	(23)	(63)	(51)	(31)	(13)
	%	%	%	%	%	%	%	%	%
All drugs combined									
White	51.1	67.3	78.6	58.8	85.8	34.7	42.0	77.5	22.2
Black	44.9	31.7	18.8	22.0	10.2	49.8	56.8	15.5	76.9
(Number)[c]	(403)	(205)	(154)	(427)	(225)	(554)	(257)	(343)	(225)

[a]Races other than white or black not listed; percentages and numbers of other races are retrievable as remainders.

[b]Cases too few for reliable percentages.

[c]Base for computation in each drug class or [d] in combined classes. Percents of listed & unlisted races (see[a]) in every case add to 100.0%.

TABLE 9.06

Marital Status and Class of Drug Involved in Death,
by City, Surveys 1 and 2 Combined

Marital Status by Class of Drug:	Chicago	Cleveland	Dallas	Los Ang.	Miami	New York	Phila.	San Fran.	Wash. D. C.
	%	%	a	%	%	%	%	%	%
Narcotics:									
Never married	61.9	54.7	(5)	45.2	70.6	69.0	49.6	45.7	62.4
Married	23.7	30.2	(5)	31.7	14.7	19.8	26.1	29.8	26.2
Separated	1.0	1.9	(-)	--	--	6.8	17.4	1.1	3.5
Divorced	12.4	13.2	(2)	19.9	14.7	2.7	4.3	22.3	5.0
Widowed	1.0	--	(-)	3.2	--	1.6	2.6	1.1	2.9
Number[b]	(194)	(53)	(12)	(186)	(34)	(368)	(115)	(94)	(141)
	(N)	%	%	a	a	%	%	%	%
Analgesics:									
Never married	(6)	43.3	20.7	(5)	(2)	45.1	57.1	28.0	45.0
Married	(8)	33.3	51.7	(5)	(9)	29.0	33.3	24.0	20.0
Separated	(-)	6.7	3.4	--	(•)	12.9	9.5	4.0	--
Divorced	(1)	10.0	20.7	(5)	(4)	6.5	---	36.0	20.0
Widowed	(-)	6.7	3.4	(-)	(2)	6.5	--	8.0	15.0
Number[b]	(15)	(30)	(29)	(15)	(17)	(31)	(21)	(25)	(20)
	%	%	%	%	%	%	%	%	%
Barbiturates:									
Never married	51.2	35.3	50.0	26.7	27.3	48.7	41.2	35.4	40.0
Married	26.4	44.1	31.6	40.0	32.5	35.9	14.7	21.3	25.7
Separated	3.2	--	2.6	0.7	1.3	2.6	8.8	1.6	14.3
Divorced	12.0	11.8	2.6	20.7	24.7	5.1	20.6	29.1	5.7
Widowed	7.2	8.8	13.2	11.9	14.3	7.7	14.7	12.6	14.3
Number[b]	(125)	(34)	(38)	(141)	(77)	(39)	(34)	(127)	(35)
	b	a	a	a	%	a	a	a	a
Sedatives:									
Never married	(10)	(6)	(1)	(3)	41.3	(-)	(8)	(6)	(-)
Married	(3)	(7)	(4)	(7)	19.6	(1)	(5)	(1)	(-)
Separated	(-)	(-)	(1)	(-)	8.7	(-)	(1)	(1)	(1)
Divorced	(1)	(3)	(4)	(2)	17.4	(-)	(2)	(6)	(-)
Widowed	(-)	(2)	(0)	(1)	13.0	(-)	(1)	(-)	(2)
Number[b]	(14)	(18)	(10)	(13)	(46)	(1)	(17)	(14)	(3)

(Continued)

TABLE 9.06 continued

Marital Status by Class of Drug:	Chi-cago %	Cleve-land a	Dal-las a	Los Ang. %	Mi-ami %	New York a	Phila. a	San Fran. %	Wash. D.C. a
Tranquilizers:									
Never married	54.5	(9)	(2)	20.0	40.9	(10)	(6)	33.3	(4)
Married	31.8	(5)	(4)	50.0	31.8	(2)	(2)	14.8	(1)
Separated	--	(-)	(-)	10.0	--	(2)	(-)	3.7	(-)
Divorced	9.1	(3)	(2)	20.0	13.6	(1)	(3)	37.0	(-)
Widowed	4.5	(-)	(1)	--	13.6	(-)	(1)	11.1	(-)
Number[b]	(22)	(17)	(9)	(20)	(22)	(15)	(12)	(27)	(5)
	%	%	%	%	%	%	%	%	a
Other:									
Never married	48.0	30.6	51.4	27.6	31.8	51.7	62.0	42.9	(5)
Married	28.0	44.9	32.4	51.7	40.9	32.8	18.0	25.0	(6)
Separated	4.0	--	5.4	3.4	4.5	8.6	14.0	7.1	(-)
Divorced	4.0	20.4	10.8	13.8	13.6	6.9	6.0	17.9	(-)
Widowed	16.0	4.1	--	3.4	9.1	--	--	7.1	(-)
Number[b]	(25)	(49)	(37)	(29)	(22)	(58)	(50)	(28)	(12)
	%	%	%	%	%	%	%	%	%
All Drugs Combined:									
Never married	56.7	41.8	38.5	35.2	37.6	63.9	51.4	38.7	55.6
Married	26.3	37.3	38.5	37.7	29.4	23.0	23.3	23.2	26.4
Separated	1.8	1.5	3.7	1.0	2.8	7.2	13.3	2.5	5.6
Divorced	11.1	14.9	14.1	20.1	19.3	3.7	8.0	27.9	6.0
Widowed	4.1	4.5	5.2	6.0	11.0	2.1	4.0	7.6	6.4
Number[c]	(395)	(201)	(135)	(398)	(218)	(512)	(257)	(315)	(216)

[a] Cases too few for reliable percentages.

[b] Excludes "unknown" or "missing" cases. Each number is the base for computation in each drug class or [c] in combined classes. Percents in every case add to 100.0%.

TABLE 9.07

Occupation and Class of Drug Involved in Death, by City, Surveys 1 and 2 Combined

Occupation by Class of Drug:	Chi-cago	Cleve-land	Dal-las	Los Ang.	Mi-ami	New York	Phila.	San Fran.	Wash. D. C.
	%	%	a	%	%	%	%	%	%
Narcotics:									
Professional	1.1	--	(-)	1.9	--	0.6	1.1	6.0	--
Semi-prof.	2.8	11.4	(-)	3.8	3.1	2.2	3.3	3.6	1.1
Skilled	5.0	13.6	(-)	18.5	21.9	15.3	11.0	13.3	12.5
Semi-skilled	21.7	15.9	(4)	32.5	25.0	30.1	29.7	21.7	19.3
Unskilled	52.2	47.7	(4)	27.4	37.5	30.7	42.9	37.3	53.4
Student	11.1	2.3	(1)	7.0	9.4	10.2	4.4	4.8	9.1
Housewife	6.1	9.1	(1)	8.9	3.1	10.8	7.7	13.3	4.5
Number[b]	(180)	(44)	(10)	(157)	(32)	(176)	(91)	(83)	(88)
	a	%	%	a	a	%	a	%	a
Analgesics:									
Professional	(1)	3.4	--	(-)	(1)	5.0	(2)	4.3	(2)
Semi prof.	(-)	--	13.0	(-)	(2)	15.0	(-)	13.0	(-)
Skilled	(-)	6.9	8.7	(3)	(2)	20.0	(2)	17.4	(3)
Semi-skilled	(3)	13.8	13.0	(6)	(3)	10.0	(5)	21.7	(2)
Unskilled	(5)	27.6	13.0	(3)	(2)	15.0	(6)	26.1	(2)
Student	(5)	24.1	13.0	(1)	(-)	5.0	(1)	8.7	(2)
Housewife	(3)	24.1	39.3	(2)	(7)	30.0	(1)	8.7	(2)
Number[b]	(14)	(29)	(23)	(15)	(17)	(20)	(17)	(23)	(14)
	%	%	%	%	%	%	%	%	%
Barbiturates:									
Professional	4.3	15.6	18.8	7.5	11.9	7.7	9.7	10.2	16.7
Semi-prof.	2.6	--	--	4.7	16.4	15.4	6.5	10.2	16.7
Skilled	7.7	6.3	12.5	20.5	10.4	19.2	25.8	26.3	13.3
Semi-skilled	22.2	21.9	28.1	15.9	13.4	7.7	9.7	19.5	26.7
Unskilled	31.6	15.6	9.4	17.8	13.4	3.8	22.6	16.9	3.3
Student	15.4	6.3	6.2	5.6	6.0	15.4	6.5	3.4	3.3
Housewife	16.2	34.4	25.0	28.0	28.4	30.8	19.4	13.6	20.0
Number[b]	(117)	(32)	(32)	(107)	(67)	(26)	(31)	(118)	(30)
	a	a	a	a	%	a	a	a	a
Sedatives:									
Professional	(2)	(1)	(1)	(4)	14.0	(-)	(1)	(-)	(1)
Semi-prof.	(-)	(1)	(1)	(2)	9.3	(-)	(1)	(2)	(1)
Skilled	(2)	(2)	(2)	(6)	16.3	(-)	(2)	(1)	(-)
Semi-skilled	(3)	(1)	(1)	(-)	18.6	(-)	(3)	(1)	(-)
Unskilled	(4)	(1)	(-)	(-)	9.3	(-)	(3)	(7)	(-)
Student	(1)	(1)	(-)	(-)	11.6	(-)	(1)	(1)	(-)
Housewife	(1)	(6)	(2)	(1)	20.9	(-)	(2)	(-)	(-)
Number[b]	(13)	(13)	(7)	(13)	(43)	(-)	(13)	(12)	(2)

(Continued)

TABLE 9.07 continued

Occupation by Class of Drug:	Chi-cago	Cleve-land	Dal-las	Los-Ang.	Mi-ami	New York	Phila.	San Fran.	Wash. D.C.
	%	a	a	a	%	a	a	%	a
Tranquilizers:									
Professional	--	(1)	(-)	(1)	4.8	(-)	(1)	12.0	(-)
Semi-prof.	--	(-)	(1)	(1)	38.1	(-)	(2)	16.0	(-)
Skilled	9.5	(1)	(3)	(2)	--	(3)	(2)	36.0	(1)
Semi-skilled	19.0	(1)	(1)	(5)	4.8	(-)	(3)	16.0	(1)
Unskilled	42.9	(3)	(2)	(3)	14.3	(2)	(1)	4.0	(1)
Student	14.3	(2)	(-)	(-)	4.8	(-)	(-)	--	(-)
Housewife	14.3	(6)	(2)	(5)	33.3	(1)	(3)	16.0	(1)
Number[b]	(21)	(14)	(9)	(17)	(20)	(6)	(12)	(25)	(4)
	%	%	%	%	%	%	%	%	a
Others:									
Professional	4.2	2.4	3.4	8.0	9.6	11.5	2.5	3.7	(1)
Semi-prof.	4.2	7.1	--	8.0	4.8	--	5.0	14.8	(-)
Skilled	8.3	7.1	31.0	24.0	19.0	19.2	17.5	18.5	(-)
Semi-skilled	25.0	16.7	10.4	36.0	19.0	7.7	42.5	33.3	(3)
Unskilled	20.8	31.0	17.3	--	28.6	38.5	25.0	7.4	(3)
Student	4.2	11.9	24.1	4.0	--	7.7	7.5	3.7	(-)
Housewife	33.3	23.8	13.8	20.0	19.0	15.4	--	18.5	(1)
Number[b]	(24)	(42)	(29)	(25)	(21)	(26)	(40)	(27)	(8)
	%	%	%	%	%	%	%	%	%
All drugs combined:									
Professional	3.0	5.2	7.3	5.4	9.0	2.8	4.4	7.6	6.1
Semi-prof.	2.4	5.2	4.5	4.8	13.4	4.3	4.9	9.7	4.8
Skilled	6.5	9.2	18.2	20.4	13.4	17.3	15.2	21.2	12.9
Semi-skilled	22.0	15.5	19.1	26.3	16.4	23.2	28.4	20.8	21.8
Unskilled	41.7	29.3	15.5	20.4	17.9	27.6	32.4	23.3	36.7
Student	12.2	10.3	11.8	5.7	6.5	9.8	5.4	4.2	7.5
Housewife	12.2	25.3	23.6	17.1	23.4	15.0	9.3	13.2	10.2
Number[c]	(369)	(174)	(110)	(334)	(201)	(254)	(204)	(288)	(147)

[a] Cases too few for reliable percentages.

[b] Excludes "unknown" or "missing" cases. Each number is the base for computation in each drug class or [c] in combined classes. Percents in every case add to 100.0%.

TABLE 9.08

Employment Status and Class of Drug Involved in Death, by City, Surveys 1 and 2 Combined

Employment status by drug class	Chi-cago	Cleve-land	Dal-las	Los Ang.	Mi-ami	New York	Phila.	San Fran.	Wash. D.C.
	Percent of Cases								
	%	%	a	%	%	%	%	%	%
Narcotics									
Employed	70.6	82.0	(5)	74.5	81.3	52.9	22.2	81.6	62.0
Unemployed	14.1	12.0	(5)	7.3	15.6	32.4	60.0	3.9	32.0
Student	9.2	--	(-)	8.2	3.1	6.9	6.7	3.9	4.0
Housewife	6.1	6.0	(-)	10.0	--	6.6	11.1	10.5	2.0
Other	--	--	(-)	--	--	1.2	--	--	--
Number[b]	(163)	(50)	(10)	(110)	(32)	(259)	(55)	(76)	(100)
	a	%	%	a	a	%	a	%	a
Analgesics									
Employed	(8)	53.3	33.3	(9)	(6)	54.2	(3)	90.0	(12)
Unemployed	(1)	--	45.8	(-)	(7)	16.7	(7)	--	(4)
Student	(2)	20.0	8.3	(1)	(-)	4.2	(1)	10.0	(2)
Housewife	(2)	23.3	12.5	(2)	(3)	25.0	(1)	--	(-)
Other	(-)	3.3	--	(-)	(2)	--	(-)	--	(-)
Number[b]	(13)	(30)	(24)	(14)	(18)	(24)	(12)	(20)	(11)
	%	%	%	%	%	%	%	%	%
Barbiturates									
Employed	60.5	61.8	51.4	47.3	44.7	41.4	22.7	79.7	39.4
Unemployed	17.5	2.9	31.4	11.8	27.6	10.3	27.3	3.4	39.4
Student	10.5	8.8	5.7	6.5	3.9	10.3	9.1	3.4	--
Housewife	10.5	26.5	11.4	29.0	13.2	27.6	22.7	11.0	6.1
Other	1.0	--	--	5.4	10.5	10.3	18.2	2.5	15.1
Number[b]	(114)	(34)	(35)	(93)	(76)	(29)	(22)	(118)	(32)
	a	a	a	a	%	a	a	a	a
Sedatives									
Employed	(12)	(6)	(4)	(7)	57.1	(-)	(1)	(11)	(1)
Unemployed	(1)	(2)	(4)	(2)	23.8	(-)	(7)	(1)	(1)
Student	(-)	(1)	(-)	(-)	7.1	(-)	(1)	(1)	(-)
Housewife	(1)	(7)	(-)	(1)	7.1	(-)	(2)	(-)	(-)
Other	(-)	(-)	(-)	(1)	4.8	(-)	(1)	(-)	(-)
Number[b]	(14)	(16)	(8)	(11)	(42)	(-)	(12)	(15)	(2)
	%	a	a	a	%	a	a	a	a
Tranquilizers									
Employed	45.5	(6)	(5)	(9)	43.5	(5)	(2)	(12)	(2)
Unemployed	27.3	(4)	(-)	(2)	21.7	(3)	(1)	(1)	(3)
Student	13.6	(2)	(-)	(-)	4.3	(-)	(-)	(-)	(-)
Housewife	13.6	(4)	(2)	(4)	26.1	(1)	(3)	(1)	(-)
Other	--	(-)	(-)	(-)	4.4	(-)	(-)	(-)	(-)
Number[b]	(22)	(12)	(7)	(15)	(23)	(9)	(6)	(19)	(5)

(Continued)

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TABLE 9.08 continued

Employment status by drug class:	Chi-cago %	Cleve-land %	Dal-las %	Los Ang. a	Mi-ami %	New York %	Phila. %	San Fran. %	Wash. D.C. %
Others									
Employed	59.1	63.8	42.9	(8)	61.9	71.9	(4)	78.6	(5)
Unemployed	4.5	12.8	25.7	(3)	23.8	9.4	(9)	3.6	(3)
Student	4.5	12.8	20.0	(1)	--	6.3	(2)	3.6	(-)
Housewife	27.3	10.6	5.7	(6)	9.5	12.5	(-)	10.7	(-)
Other	4.5	--	5.7	(-)	4.8	--	(-)	3.6	(2)
Number[b]	(22)	(47)	(35)	(18)	(21)	(32)	(15)	(28)	(10)
	%	%	%	%	%	%	%	%	%
All Drugs Combined									
Employed	65.2	62.2	46.2	61.4	53.3	53.8	22.3	81.8	56.0
Unemployed	14.9	9.8	33.6	10.0	25.0	27.5	50.9	3.6	33.7
Student	9.5	9.3	9.2	6.6	3.8	6.8	8.0	4.0	3.6
Housewife	9.8	18.1	9.2	19.7	11.3	10.2	14.3	9.1	2.4
Other	0.6	0.6	1.7	2.3	6.6	1.7	4.5	1.5	4.2
Number[c]	(348)	(193)	(119)	(259)	(212)	(353)	(112)	(274)	(166)

[a] Cases too few for reliable percentages.

[b] Excludes "unknown" or "missing" cases. Each number is the base for computation in each drug class or [c] in combined classes. Percents in each case add to 100.0%.

Chapter 10

Accidental Deaths

SUMMARY

"Accidental deaths" is the category or mode that covers cases referred to in everyday language as "drug abuse" or "overdoses," although it also covers those few cases of therapeutic misuse that may come to a medical examiner's attention. Deaths in which a single psychoactive drug or multiple substances were either indirectly or directly involved are included. In New York and Philadelphia, the mode of death was coded as "unknown" in large proportions of cases; the remaining numbers were so low that percentages should be interpreted cautiously.

The mean age of accidental deaths was roughly 30 years. In the seven cities with sufficient cases, whites outnumbered blacks, except in Washington, D.C., and males consistently outnumbered females. In the same seven cities, half or more were employed.

Narcotic drugs accounted for more accidental deaths than did other drugs among the top five single drug types, but the percentages varied widely by city. Polydrug cases were frequent and seem to be increasing over time. Blacks and males outnumbered whites and females, respectively, in the narcotic drug category; victims were somewhat younger than in the other drug categories.

The typical accidental death was difficult to portray, in part because the classification is broad and somewhat inconsistent from city to city.

ACCIDENTAL DEATHS

The survey defined its purpose as the study of "drug-involved deaths," which can encompass a multitude of intentions, situations, and physiological reactions of the victims. Nonetheless, a major interest in these data was the extent and character of drug abuse deaths or deaths that come about as a result of individuals' decisions to use psychoactive drugs outside the supervision of a physician.

In this chapter the group of deaths identified as "accidental" is examined as a rough approximation of "drug abuse" or "overdose" deaths. These are cases where the victim may have used the drug(s) for any number of reasons, but not deliberately to induce death, as

in suicides. The substances are limited to psychoactive drugs, but there is still the possibility that some deaths were the result of so-called therapeutic misadventures, not drug abuse. It is almost impossible to identify a pure group of such cases except by carrying out ancillary interviews with family and friends. Though not ideal as a category, accidental deaths, operationally defined below, serves this need fairly well. Similar analyses were conducted on suicide and homicide cases, reported in chapter 11.

As described earlier, the study was conducted in two waves separated by about two years; thus, changes in the statistics from the first to the second survey can indicate changes in patterns of occurrence of deaths overall as well as in the nine cities.

Cases were considered accidental if and only if the questions designed to measure mode of death were answered according to the definitions. Code Sheet #3 was used to characterize these cases. There were several choices of differing mechanisms or manners of death for which "accidental or 'unexpected'" was the summarizing term (in parts A, B, D, E, and F of the code). A and B are the most pertinent among the following, since they identify accidental deaths "caused" by one or more drugs. The responses from Code #3 were as follows:

Drug-Induced

A. Simple or direct--the drug in question was specifically the cause of death with no other agent playing a significant role.
01. Accidental or "unexpected"

B. Drug in combination with some other potentiating or synergistic pharmacologic agent, such as alcohol, barbiturates, etc.
05. Accidental or "unexpected"

C. Idiosyncratic--an unexpected effect, such as an anaphylactic or immune reaction.

Drug-Related

D. Drug(s) in combination with some pre-existing and potentially deadly physiological condition, such as diabetes, chronic heart condition, etc.
10. Accidental or "unexpected"

E. Drug(s) in combination with some physical event outside of the patient's body, such as death by vehicle or gunfire while under the influence, etc.
14. Accidental or "unexpected"

F. Drug(s) in combination with some medical disorder or disease probably produced by drug abuse, such as hepatitis, bacterial endocarditis, tetanus, etc.
18. Accidental or "unexpected"

It should be mentioned that in equivocal cases most medical examiners or coroners tend to classify a case as accidental or undetermined rather than suicidal. Much greater care is usually taken to ensure that a possible homicide (at least of a malicious and willful nature) is not falsely classified as an accidental death, but it is conceivable that a few such cases slip through and contaminate the data.

The distribution of cases by mode as well as role of drug (i.e., drug-induced vs. drug-related) for each city is displayed in tables 4.01 and 4.02. The total number of accidental deaths coded in both surveys was 1128, or 37.5 percent (table not shown). Unfortunately, fairly large proportions of cases in New York and Philadelphia were coded "unknown" as to mode of death, leaving only 22 and 28 cases, respectively, for analysis of accidental deaths. The percentages are provided in most tables, but they should be interpreted cautiously.

CHARACTERISTICS OF VICTIMS

Table 10.01 provides data on the selected demographic and social characteristics of victims of accidental death in each of the nine cities in the two surveys combined. The mean age of accidental death was roughly 30 (table not shown). Table 10.01 combines ages by five- and ten-year spans. There are some variations from city to city, with generally highest percentages in the age range of 20 to 29 years. The distribution by sex shows a greater number of males than females. Omitting New York and Philadelphia, the range in the combined surveys is from 57.3 percent males in Miami to 76.4 percent in Washington, D.C. In the racial breakdown, for the seven remaining cities, whites outnumber blacks except in Washington, but the proportion of blacks in most other cities is rather high (from 20.3 to 46.2 percent); the proportion of "other racial groups" is high in Los Angeles. The largest group was "never married" (approximately 48 percent in both samples), perhaps reflecting the young age of the victims. The percent married ranged from 18.0 in Miami to 43.3 percent in Dallas. Again omitting New York and Philadelphia, half or more of the victims were employed. The percent employed in those seven cities varied from 50.0 in Dallas to 83.5 in San Francisco The majority were in skilled, semiskilled, and unskilled occupations.

Table 10.02 shows the distribution of drug types of the drugs most importantly involved in the accidental deaths. The narcotic category was clearly the largest for a single drug type in all but one city (Miami), with barbiturates well behind. There were large variations by city. Washington, D.C. had 88.8 percent in the narcotic category, in both surveys combined, whereas Dallas had only 25.0 percent in that category.

Table 10.03 summarizes the findings on the role of the drug in accidental deaths. A single direct drug effect was by no means the "cause" in the majority of cases. As many as 51.0 percent (in Los Angeles, both surveys combined) were polydrug (combined) cases. Also, the proportion of polydrug cases increased between the first and second surveys.

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TABLE 10.01

Selected Characteristics of Accidental Death Cases, by City,
Surveys 1 and 2 Combined

Selected Characteristics:	Chicago	Cleveland	Dallas	Los Ang.	Miami	New York	Phila.	San Fran.	Wash. D.C.
				Percent of cases[a]					
AGE:	%	%	%	%	%	%	%	%	%
0-19 yr.	15.2	8.3	20.0	9.5	11.0	13.6	14.3	5.1	12.4
20-24	38.6	20.7	20.0	28.9	30.5	9.1	10.7	17.5	44.9
25-29	15.2	19.0	17.5	19.0	29.3	13.6	17.9	23.2	16.9
30-39	15.9	19.0	7.5	24.5	12.2	36.4	32.1	23.2	16.9
40-49	8.7	24.8	20.0	12.9	3.7	18.2	25.0	14.1	6.7
50 or older	6.5	8.3	15.0	5.1	13.4	9.1	--	16.9	2.2
Number[b]	(277)	(121)	(40)	(294)	(82)	(22)	(28)	(177)	(89)
SEX:	%	%	%	%	%	%	%	%	%
Male	72.2	65.0	67.5	69.0	57.3	63.6	82.1	67.8	76.4
Female	27.8	35.0	32.5	31.0	42.7	36.4	17.9	32.2	23.6
Number[b]	(277)	(120)	(40)	(294)	(82)	(22)	(28)	(177)	(89)
RACE:	%	%	%	%	%	%	%	%	%
White	50.9	58.3	62.5	45.6	75.6	31.8	32.1	71.8	6.7
Black	46.2	41.7	35.0	29.9	20.7	40.9	67.9	20.3	93.3
All other races	2.9	--	2.5	24.5	3.7	27.3	--	7.9	--
Number[b]	(277)	(120)	(40)	(294)	(82)	(22)	(28)	(177)	(89)
MARITAL STATUS:	%	%	%	%	%	%	%	%	%
Never married	58.4	46.2	46.7	44.8	59.0	57.2	37.0	41.4	65.9
Married	26.2	32.4	43.3	33.1	18.0	33.3	33.3	27.0	23.9
Divorced, widowed or separated	15.4	21.4	10.0	22.1	23.0	9.5	29.7	31.6	10.2
Number[b]	(272)	(117)	(30)	(275)	(78)	(21)	(27)	(152)	(88)
EMPLOYMENT STATUS:	%	%	%	%	%	%	c	%	%
Employed	63.2	68.8	50.0	56.7	64.0	28.6	(2)	83.5	52.4
Unemployed	11.5	8.9	25.0	8.0	21.3	38.1	(3)	3.8	16.7
Other[d]	25.3	22.3	25.0	35.3	14.7	33.3	(8)	12.7	30.9
Number[b]	(253)	(112)	(28)	(201)	(75)	(21)	(15)	(133)	(84)
OCCUPATION:	%	%	%	%	%	c	%	%	%
Professional & semi-prof.	3.5	7.7	12.0	6.9	11.7	(1)	14.3	12.4	1.4
Skilled, semi-skilled & unskilled	71.8	60.6	56.0	72.3	61.0	(5)	66.7	68.3	69.4
Other[e]	24.7	31.7	32.0	20.8	27.3	(9)	19.0	19.3	29.2
Number[b]	(259)	(104)	(25)	(231)	(77)	(15)	(21)	(145)	(72)

[a] Each column adds to 100.0%

[b] Excludes "unknown" and "missing" cases. Numbers represent bases on which percentages were calculated for each city.

[c] Cases too few for reliable percentages.

[d] Housewife, student, retired, and preschool.

[e] Housewife, student, or never employed.

TABLE 10.02

Types of Drugs Responsible for Accidental Deaths, by City,
Surveys 1 (N=2000) and 2 (N=1004)

				Percent of Cases[a]					
Types of Drugs:	Chi- cago	Cleve- land	Dal- las	Los Ang.	Mi- ami	New York	Phila.	San Fran.	Wash. D.C.
	%	%	%	%	%	b	%	%	%
(SURVEY 1)									
Narcotics	49.0	29.7	28.6	66.7	23.2	(2)	50.0	66.7	83.9
Analgesics	2.1	12.2	14.3	3.3	5.4	(-)	5.0	3.5	8.1
Barbiturates	35.3	14.9	17.9	21.0	25.0	(-)	5.0	10.5	1.6
Tranquilizers	6.3	9.5	3.6	3.8	7.1	(-)	--	2.6	1.6
Other	7.3	33.8	35.7	5.2	39.3	(3)	40.0	16.7	4.8
Number[c]	(190)	(74)	(28)	(210)	(56)	(5)	(20)	(114)	(62)
	%	%	b	%	%	b	b	%	%
(SURVEY 2)									
Narcotics	62.1	54.4	(2)	67.5	53.9	(14)	(1)	52.4	100.0
Analgesics	9.2	15.2	(1)	2.4	3.9	(-)	(3)	11.1	--
Barbiturates	14.9	2.2	(-)	16.9	11.5	(-)	(-)	14.3	--
Tranquilizers	4.6	6.5	(-)	1.2	3.9	(2)	(1)	12.7	--
Others	9.2	21.7	(9)	12.0	26.8	(-)	(3)	9.5	--
Number[c]	(87)	(46)	(12)	(83)	(26)	(16)	(8)	(63)	(27)
	%	%	%	%	%	%	%	%	%
(BOTH SURVEYS COMBINED)									
Narcotics	53.1	39.2	25.0	66.9	32.9	76.2	39.3	61.6	88.8
Analgesics	4.3	13.3	12.5	3.1	4.9	--	14.4	6.2	5.6
Barbiturates	28.9	10.0	12.5	19.8	20.7	--	3.5	11.9	1.1
Tranquilizers	5.8	8.3	2.5	3.1	6.1	9.5	3.5	6.2	1.1
Others	7.9	29.2	47.5	7.1	35.4	14.3	39.3	14.1	3.4
Total Number[c]	(277)	(120)	(40)	(293)	(82)	(21)	(28)	(177)	(89)

[a]Each column adds to 100.0%.

[b]Cases too few for reliable percentages.

[c]Excludes "unknown" and "missing" cases. Numbers represent bases on
 which percentages were calculated for each city.

Table 10.04 shows who reported the accidental deaths. Most accidental deaths (omitting Philadelphia and New York) were reported by a family member or a friend. The deceased person was judged to have died at the site of discovery of the body in 91.6 percent of Survey 1 and 82.9 percent of Survey 2 cases (table not shown).

No external injury was seen in 85.8 percent of Survey 1 and 88.6 percent of Survey 2 cases. A few thermal burns were reported, presumably due to subjects who fell asleep while smoking. Automobile accidents were involved in only 4.1 percent of the accidental deaths of Survey 1 and 4.4 percent of Survey 2. Needle and track marks were frequently seen. Previous psychiatric diagnosis involved drug addiction in 38.1 percent of cases in Survey 1 and 13.3 percent in Survey 2. There were significant numbers of other psychiatric diagnoses in both surveys. Fourteen percent of Survey 1 cases and 13.9 percent of Survey 2 were said to be heavy drinkers of alcoholic beverages. This can be compared with the estimate published a few years earlier that 7 percent of the adult population manifest the behavior of alcohol abuse (USDHEW 1971) (tables for these figures not shown).

DIFFERENCES BY DRUG CATEGORY

Perhaps of greater interest than the demographic and social characteristics of accidental death cases shown for each city is the distribution of these characteristics by drug category. Since cases were few in the separate cities, only the combined totals are given (table 10.05). There seem to be proportionately more older victims in the non-narcotic drug categories. Males predominate in the largest category, narcotic cases, but females outnumber males in the classes of analgesics and sedatives. Blacks are overrepresented in the narcotic category (43.8 percent) but less so in the other drug classes. "Never married" predominates in the narcotic and sedative classes, but there were substantial proportions of married or previously married victims in the other classes. The narcotic cases showed the highest rates of employment, compared with barbiturates and "others." However, there were comparatively large proportions of housewives, students, or retired persons in these two classes.

Table 10.06 summarizes the role of the drug in the death event and the external evidence of drug usage for each category of drug. A direct pharmacological effect of a single drug is the most common mechanism of death for essentially all drug categories. However, death at the time of a physical illness or event did occur in a fair proportion of cases among the barbiturate deaths. The narcotic drug cases have the highest incidence of stigmata of drug usage such as needle marks and track marks.

As previously noted, the classification of accidental death is broad, diffuse, and somewhat inconsistent from city to city. It is not surprising, therefore, that the picture of the "typical" accidental death that emerges from this analysis is not as clear as might be desired,

TABLE 10.03

Role of Drug in Accidental Death Cases, by City, Surveys 1 (N=2000) and 2 (N=1004)

Role of drug:	Chi-cago	Cleve-land	Dal-las	Los Ang.	Mi-ami	New York	Phila.	San Fran.	Wash. D.C.
	%	%	%	%	%	b	%	%	%
(SURVEY 1)									
Direct	27.4	47.3	53.6	40.3	57.1	(-)	5.0	46.5	72.6
Combined	46.8	43.2	14.3	44.6	23.2	(1)	--	41.2	14.5
Other	25.8	9.5	32.1	15.1	19.6	(5)	95.0	12.3	12.9
Number	(190)	(74)	(28)	(211)	(56)	(6)	(20)	(114)	(62)
	%	%	b	%	%	b	b	%	%
(SURVEY 2)									
Direct	31.0	34.8	(5)	30.1	50.0	(-)	(-)	25.4	33.3
Combined	50.6	63.0	(3)	67.5	30.8	(-)	(3)	61.9	44.5
Other	18.4	2.2	(4)	2.4	19.2	(16)	(5)	12.7	22.2
Number	(87)	(46)	(12)	(83)	(26)	(16)	(8)	(63)	(27)
	%	%	%	%	%	%	%	%	%
(BOTH SURVEYS COMBINED)									
Direct	28.5	42.5	50.0	37.4	54.9	--	3.6	39.0	60.7
Combined	48.0	50.8	17.5	51.0	25.6	4.5	10.7	48.6	23.6
Other	23.5	6.7	32.5	11.6	19.5	95.5	85.7	12.4	15.7
Total Number[b]	(277)	(120)	(40)	(294)	(82)	(22)	(28)	(177)	(89)

[a]Each column adds to 100.0%.

[b]Excludes "missing" and "unknown" cases. Numbers represent bases on which percentages were calculated for each city.

TABLE 10.04

Reporting Source of Accidental Death Cases, by City, Surveys 1 and 2 Combined

Percent of cases[a]

Reporting Source:	Chi-cago	Cleve-land	Dal-las	Los Ang.	Mi-ami	New York	Phila.	San Fran.	Wash. D.C.
	%	%	%	%	%	%	b	%	%
Police	7.4	4.7	18.8	6.4	8.8	20.0	(7)	2.9	2.9
Family	31.4	56.6	34.4	37.6	40.0	20.0	(5)	18.1	44.3
Friend	43.2	26.4	25.0	37.9	37.5	10.0	(-)	52.0	47.1
Bystander	17.5	8.5	12.5	14.2	12.5	--	(1)	21.6	4.3
Medical person	0.4	3.8	9.4	3.9	1.3	50.0	(2)	5.3	1.4
Number[c]	(229)	(106)	(32)	(282)	(80)	(20)	(15)	(171)	(70)

[a]Each column adds to 100.0%.

[b]Cases too few for reliable percentages.

[c]Excludes "unknown" and "missing" cases. Numbers represent bases on which percentages were calculated for each city.

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TABLE 10.05

Selected Personal Characteristics of Accidental Death Cases, by Drug Type, Surveys 1 and 2 Combined

Selected Character-istics	Percent of cases[a]					Psycho-stimu-lants	Others
	Nar-cotics	Anal-gesics	Barbi-turates	Seda-tives	Tranqui-lizers		
AGE:	%	%	%	%	%	b	%
0 - 19 yr.	12.1	33.3	21.9	4.8	15.0	(-)	35.5
20 - 24	37.4	--	20.8	33.3	20.0	(1)	25.8
25 - 29	20.5	4.8	13.5	9.5	10.0	(6)	12.9
30 - 39	19.9	23.8	16.7	9.5	20.0	(1)	9.7
40 - 49	6.1	19.0	9.4	19.0	20.0	(1)	16.1
50 yr. +	4.0	19.0	17.7	23.8	15.0	(-)	--
Number [c]	(297)	(21)	(96)	(21)	(20)	(9)	(31)
SEX:	%	%	%	%	%	b	%
Male	79.5	33.3	55.2	38.1	65.0	(8)	77.4
Female	20.5	66.7	44.8	61.9	35.0	(1)	22.6
Number[c]	(297)	(21)	(96)	(21)	(20)	(9)	(31)
RACE:	%	%	%	%	%	b	%
White	45.1	66.7	62.5	90.5	70.0	(7)	54.8
Black	43.8	28.6	30.2	9.5	20.0	(2)	35.5
Other	11.1	4.7	7.3	--	10.0	(-)	9.7
Number[c]	(297)	(21)	(96)	(21)	(20)	(9)	(31)
MARITAL STATUS: Never	%	b	%	%	%	b	%
married	61.0	(7)	45.1	57.1	35.0	(5)	63.3
Married	24.8	(8)	34.1	19.1	40.0	(2)	16.7
Separated, divorced or widow-ed	14.2	(4)	20.8	23.8	25.0	(-)	20.0
Number[c]	(282)	(19)	(91)	(21)	(20)	(7)	(30)
EMPLOYMENT STATUS:	%	b	%	b	b	b	%
Employed	76.4	(5)	57.7	(13)	(8)	(8)	30.8
Unemployed	12.3	(2)	12.7	(2)	(4)	(-)	30.8
Other[d]	11.4	(8)	29.6)	(4)	(5)	(-)	38.4
Number[c]	(220)	(15)	(71)	(19)	(17)	(8)	(26)
OCCUPATION:	%	b	%	b	b	b	%
Professional & semi-prof.	7.7	(1)	7.7	(1)	(1)	(2)	--
Skilled, semi-skilled & unskilled	78.3	(8)	52.6	(13)	(12)	(6)	57.1
Other[e]	14.0	(8)	39.7	(5)	(5)	(-)	42.9
Number [c]	(235)	(17)	(78)	(19)	(18)	(8)	(21)

[a]Each column of percentages adds to 100.0%.

[b]Cases too few for reliable percentages.

[c]Excludes "missing" and "unknown" cases. Numbers represent bases on which percentages were calculated for each drug type.

[d]Housewife, student, retired, and preschool.

[e]Housewife, student, or never employed.

TABLE 10.06

Role of Drug in Death and External Bodily Evidence of Accidental Death Cases, by Drug Type, Surveys 1 and 2 Combined

Role and Evidence:	Nar-cotics	Anal-gesics	Barbit-urates	Seda-tives	Tranqui-lizers	Psycho-stimu-lants	Others
	Percent of cases[a]						
	%	%	%	%	%	b	%
ROLE OF DRUG IN DEATH:							
Direct	76.1	76.2	62.5	57.1	55.0	(6)	61.3
Combined	4.8	--	3.1	--	10.0	(1)	--
Illness	7.7	19.0	10.4	9.5	25.0	(-)	16.1
Event	4.0	4.8	22.9	33.3	10.0	(-)	6.5
Abuse	7.4	--	1.1	--	--	(2)	16.1
Number[c]	(297)	(21)	(96)	(21)	(20)	(9)	(31)
	%	b	%	%	%	b	%
EXTERNAL BODILY EVIDENCE:							
None	16.0	(16)	81.5	90.0	85.7	(6)	60.0
Needle marks	44.4	(-)	10.9	10.0	4.8	(3)	20.0
Tracks	32.0	(-)	5.4	--	4.8	(1)	16.0
Other[d]	7.6	(2)	2.2	--	4.8	(-)	4.0
Number[c]	(369)	(18)	(92)	(20)	(21)	(10)	(25)

[a]Each column adds to 100.0%.

[b]Cases too few for reliable percentages.

[c]Excludes "unknown" and "missing" cases. Numbers represent bases on which percents were calculated for each drug type.

[d]"Other" includes skin punctures, and discharge.

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Chapter 11

Suicides and Homicides

SUMMARY

Suicides made up about one-fourth and homicides about one-tenth of the cases of drug-involved deaths in the two surveys. Most of the homicides were cases in which some other physical event such as a shooting had occurred, but drugs were also found. The cases labeled "definitely suicide" more often were female and somewhat older than the cases as a whole; whites were overrepresented. A very high percentage of suicides were reported as emotionally depressed before death. The most frequent signal they gave was talking about death. Barbiturates were the most commonly used drug type in all nine cities; narcotics were rarely used. Alcohol was also present in about one-fourth of the suicide cases.

Homicides presented a picture almost the reverse of the suicide cases. Although the cases were too few for formal analysis, they appeared to be primarily male and black, younger, and in most cases had prior arrest records.

SUICIDES

Drugs were listed as cause of death in about 31 percent of all suicide cases in the United States in 1971. Among these drug deaths, barbiturates played a prominent role, being listed about 25 percent of the time (Vital Statistics, 1971). Statistics on deaths associated specifically with psychotropic drugs and their relationship to suicide have been rather sketchy. One item on the reporting form required that each death be labeled as one of the following: (1) definitely suicide; (2) probably suicide; (3) accidental but suspicious ; (4) definitely not suicide; or (5) unknown (usually due to missing data). The following analysis is based upon Category 1, cases listed as "definitely suicide." Cases coded as "probable" or "suspicious" were relatively few and undoubtedly represent decision-making that differs among the examiners. It should be remembered that this analysis involves a special type of suicide - not only were the cases involved with psychotropic drugs, but each ended up officially as a "coroner's case." Therefore, comparisons with general suicide statistics may give diverse results.

TABLE 11.01

Proportion of Suicides Among Drug-Related Deaths, by City,
Survey 1 (N=2000) and Survey 2 (N=1004)

SURVEYS:	Chicago	Cleveland	Dallas	Los Ang.	Miami	New York	Phila.	San Fran.	Wash. D.C.
			Percent of drug-related deaths reported as "definitely suicide"						
SURVEY 1	11.2%	39.3%	30.0%	24.7%	54.3%	6.5%	10.6%	33.2%	25.3%
Number[a]	(295)	(150)	(100)	(300)	(151)	(403)	(199)	(250)	(150)
SURVEY 2	10.9%	23.2%	54.1%	40.3%	62.5%	13.3%	29.1%	30.8%	20.0%
Number[a]	(128)	(69)	(61)	(144)	(80)	(240)	(103)	(104)	(75)
COMBINED	11.1%	34.2%	39.1%	29.7%	57.1%	10.6%	16.9%	32.5%	23.6%
Total number[a]	(423)	(219)	(161)	(444)	(231)	(643)	(302)	(354)	(225)

[a] Numbers represent bases on which percentages were calculated.

Of the 3004 cases in Surveys 1 and 2, 726 were reported as "definitely suicide." The distributions by survey and city are shown in table 11.01. Three of the larger cities, New York, Chicago, and Philadelphia, showed relatively low percentages of suicides among their drug-involved deaths (under 20 percent). Cleveland, San Francisco, Washington, D.C., Dallas, and Los Angeles were in a medium range and Miami had the highest (57 percent for combined surveys).

Differences among cities may well have reflected local conditions under which deaths were reported and how likely it was for a suicide to be detected. For example, New York, Chicago, and Philadelphia had large caseloads, subjects with high mobility, limited resources for studying the personal background of each case, and usually had to accept the evidence provided from the corpse itself and from the police. Although Los Angeles had to cope with similar problems. its medical examiner staff was highly oriented toward clues of suicide. Los Angeles is kown as the place where the "psychological autopsy" began, and investigative behavioral scientists were still on its staff. Miami, with its older population, might have been expected to have a higher suicide rate. In addition, its staff frequently used modified psychological autopsies (for example, telephone interviews with significant others).

Characteristics of Suicide Cases

Selected characteristics of suicide cases by city for each survey are shown in table 11.02, beginning with the means and standard deviations of age of death. Combining data from the surveys, the mean age was between 35 and 45 years, which was somewhat higher than for other drug-involved deaths. Miami, with its older general population, had the highest mean, 48.4 years.

The general picture of a preponderance of females over males is consistent with other findings that women are more apt than men

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TABLE 11.02

Selected Characteristics of Suicide Cases,
by City, Surveys 1 and 2 Combined

Character-istics:	Chi-cago	Cleve-land	Dal-las	Los Ang.	Mi-ami	New York	Phila.	San Fran.	Wash. D.C.
AGE:									
Mean (yrs)	40.5	40.4	39.3	46.3	48.4	38.5	35.3	43.6	45.5
S.D.	19.9	16.9	14.8	15.9	19.5	13.0	16.1	18.8	17.0
Number	(47)	(75)	(63)	(132)	(132)	(58)	(51)	(115)	(53)
Percent of cases[a]									
	%	%	%	%	%	%	%	%	%
SEX:									
Male	53.2	29.3	47.6	40.2	44.7	37.9	56.9	48.7	39.6
Female	46.8	70.7	52.4	59.8	55.3	62.1	43.1	51.3	60.4
Number[b]	(47)	(75)	(63)	(132)	(132)	(58)	(51)	(115)	(53)
	%	%	%	%	%	%	%	%	%
RACE:									
White	91.5	85.3	93.7	86.4	93.2	74.1	74.5	85.2	71.7
Black	6.4	12.0	4.8	6.0	1.5	13.8	23.5	7.0	24.5
Other races	2.1	2.7	1.5	7.6	5.3	12.1	2.0	7.8	3.8
Number[b]	(47)	(75)	(63)	(132)	(132)	(58)	(51)	(115)	(53)
	%	%	%	%	%	%	%	%	%
MARITAL STATUS:									
Never married	34.8	33.8	26.7	16.4	25.6	38.2	48.0	37.2	40.4
Married	37.0	47.3	41.7	47.5	33.3	38.2	26.0	20.4	21.2
Widowed, divorced, & sepa-rated	28.2	18.9	31.6	36.1	41.1	23.6	26.0	42.4	38.4
Number[b]	(46)	(74)	(60)	(122)	(129)	(55)	(50)	(113)	(52)
	%	%	%	%	%	%	%	%	%
EMPLOYMENT STATUS:									
Employed	75.6	52.8	59.2	59.8	49.6	48.7	20.7	82.7	57.5
Unemployed	6.7	8.3	18.4	7.3	27.8	23.1	37.9	3.1	37.5
Other	17.7	38.9	22.4	32.9	22.6	28.2	41.4	14.3	5.0
Number[b]	(45)	(72)	(49)	(82)	(115)	(39)	(29)	(98)	(40)
	%	%	%	%	%	%	%	%	%
OCCUPATION:									
Prof. & semiprof.	14.9	13.3	14.3	13.6	27.3	15.5	13.7	25.2	24.6
Skilled, semiskill-ed & un-skilled	59.6	36.0	36.5	45.5	31.0	20.7	51.0	50.4	35.8
Other[c]	25.5	50.7	49.2	40.9	41.7	63.8	35.3	24.4	39.6
Number[b]	(47)	(75)	(63)	(132)	(132)	(58)	(51)	(115)	(53)

[a] Percents add to 100.0%

[b] Excludes "unknown" and "missing" cases. Numbers represent bases on which percentages were calculated.

[c] Other = housewife, student, or never employed.

TABLE 11.03

Incidence of Depression and "Signals" Among Suicide Cases,
by City, Surveys 1 and 2 Combined

Depression & "Signals"	Percent of Cases [a]								
	Chi-cago	Cleve-land	Dal-las	Los Ang.	Mi-ami	New York	Phila.	San Fran.	Wash. D.C.
	%	%	%	%	%	%	%	%	%
Incidence of Depression:									
Yes	94.9	89.8	88.7	97.3	89.5	82.1	86.1	96.3	95.6
No	5.1	10.2	11.3	2.7	10.5	17.9	13.9	3.7	4.4
Number [b]	(39)	(59)	(53)	(111)	(114)	(39)	(36)	(81)	(45)
	%	%	%	%	%	c	%	%	%
"Signals":									
Talk of Death	45.8	45.0	44.4	40.0	29.1	(-)	26.5	45.4	69.0
Threats	25.0	40.0	22.3	28.9	27.9	(7)	35.3	24.2	17.2
Non-talk behavior	4.2	--	--	2.2	1.2	(1)	8.8	6.1	7.0
Letters	8.3	--	--	--	2.3	(1)	5.9	9.1	3.4
Creative writing	--	--	--	2.2	1.2	(-)	---	--	--
None	16.7	15.0	33.3	26.7	38.3	(3)	23.5	15.2	3.4
Number [b]	(24)	(20)	(36)	(45)	(86)	(12)	(34)	(33)	(29)

[a] Percents add to 100.0%

[b] Excludes "unknown" and "missing" cases. Numbers represent bases on which percentages were calculated.

[c] Cases too few for reliable percentages.

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to use drugs as a means of committing suicide (Berger 1967). Suicide by psychoactive drug was most common among whites. The proportion, generally between 70 and 90 percent, ranged from a low of 71.7 percent white in New York to a high of 93.7 percent in Dallas.

Cases were fairly evenly divided among the three categories of marital status used in the analysis. In three cities, married cases were the highest proportion, in two cities, those never married were the highest proportion, and in one city, San Francisco, the highest proportion were the widowed, divorced, or separated.

In six cities, the majority of suicide victims were employed. In Philadelphia a large number of students and housewives were reported. Occupational categories were (1) professional and semiprofessional; (2) skilled, semiskilled, and unskilled; and (3) students and housewives. Generally, in both surveys there were more cases in the skilled, semiskilled, and unskilled group than in the other two categories. Suicides by professionals were more common in Miami, San Francisco, and Washington.

Emotional State and Suicide Signals

A number of emotional symptoms usually accompany suicides, one of which is depression. In all nine cities, as seen in table 11.03, a very high percentage of suicide victims (ranging from 82.1 to 97.3 percent) were reported as having been emotionally depressed just prior to taking their own lives.

Suicide victims often emit "signals" prior to their death, giving positive indications of contemplating suicide. In most of the nine cities the most frequent signal employed by the suicide victims appeared to be "talking about death," followed closely by the "overt threat" of taking one's life. The majority of the remaining cases apparently did not communicate any desire to take their lives, or else it was unknown to those investigating the case.

Types of Drugs Used

The type of drug most commonly used in suicide deaths in the nine cities was barbiturates, which accounted for 48.5 percent of all drugs used (table not shown). In both surveys combined, cities varied from 27.5 to 74.8 percent (table 11.04). The next most common types were analgesics and tranquilizers. Narcotics were used by a fairly small proportion, which is consistent with an earlier report (Baden 1972). Only a few cities show any sizable differences from Survey 1 to Survey 2. In Miami, involvement of barbiturates doubled between the two surveys.

Alcohol, while by definition not included as a primary cause of death in these cases, was present in significant amounts in 24 percent of them (table not shown). It is likely, of course, that at least some of these cases were influenced by the drug-alcohol combination and that perhaps some suicides would not have occurred under the influence of only one of the substances.

TABLE 11.04

Types of Drugs Associated With Suicide Cases, by City,
Survey 1 (N=2000) and Survey 2 (N=1004)

Type of Drug:	Chi-cago	Cleve-land	Dal-las	Los Ang.	Mi-ami	New York	Phila.	San Fran.	Wash. D.C.
Percent of cases[a]									
(SURVEY 1)	%	%	%	%	%	%	%	%	%
Opiates	--	--	--	2.7	1.2	7.7	23.8	1.2	7.9
Analgesics	6.1	18.6	26.7	6.8	8.5	19.2	14.3	6.0	28.9
Barbiturates	78.8	28.8	33.3	63.5	28.1	19.2	19.0	75.9	47.4
Tranquilizers	3.0	10.2	13.3	4.1	17.1	3.9	4.8	4.8	7.9
Others	12.1	42.4	36.7	22.9	45.1	50.0	38.1	12.1	7.9
Number[b]	(33)	(59)	(30)	(74)	(82)	(26)	(21)	(83)	(38)
(SURVEY 2)	c	c	%	%	%	%	%	%	c
Opiates	(4)	(3)	--	1.7	4.0	3.1	3.3	--	(-)
Analgesics	(-)	(2)	27.3	--	6.0	34.4	13.3	6.3	(2)
Barbiturates	(4)	(5)	45.5	56.9	54.0	37.5	33.3	71.9	(10)
Tranquilizers	(4)	(-)	6.0	19.0	14.0	12.5	23.3	--	(-)
Others	(2)	(6)	21.2	22.4	22.0	12.5	26.8	21.8	(3)
Number[b]	(14)	(16)	(33)	(58)	(50)	(32)	(30)	(32)	(15)
(COMBINED SURVEYS)	%	%	%	%	%	%	%	%	%
Opiates	8.5	4.0	--	2.3	2.3	5.2	11.8	0.9	5.7
Analgesics	4.3	17.3	27.0	3.8	7.6	27.6	13.7	6.1	24.5
Barbiturates	63.8	29.3	39.7	60.6	37.9	29.3	27.5	74.8	52.8
Tranqui-lizers	10.6	8.0	9.5	10.6	15.9	8.6	15.7	3.5	5.7
Others	12.8	41.3	23.8	22.7	36.3	29.3	31.4	14.8	11.3
Total Number[b]	(47)	(75)	(63)	(132)	(132)	(58)	(51)	(115)	(53)

[a] Percents add to 100.0%

[b] Excludes "unknown" or "missing" cases. Numbers represent bases on which percents were calculated.

[c] Cases too few for reliable percentages.

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HOMICIDES

Among the 3004 cases described in this study, 276, or better than nine percent, were homicide victims. Involving psychoactive drugs, they were cases brought to the medical examiner or coroner and judged to have been murdered. This rate of 920 per 100,000 is several hundred times that of the rate of homicides in the general population (Herjanic and Meyer 1976). Logically this figure cannot be compared with the homicide rate for the general population, but it does seem appropriate to conclude that homicide and drug abuse are related in some way.

In nearly every instance among these 276 cases, the death occurred in connection with some physical event outside the victim's body - that is, a shooting, stabbing, or similar event (98 percent) while the victim was under the influence of a psychotropic drug. In a few cases the drug itself apparently was the instrument of murder..

The incidence of homicides among drug-involved deaths in the nine cities is seen in table 11.05. Philadelphia, Washington, and Chicago had the highest proportions of homicides and Dallas, Los Angeles, and Miami the lowest.

The numbers of homicide cases in some cities were so small that analysis of their characteristics was not feasible. Can examination of the raw numbers, the homicides seemed to resemble the narcotics cases described earlier. One tabulation of prior arrest records of the homicides suggested that they were drawn almost entirely from a criminal population (tables not shown).

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TABLE 11.05

Proportion of Homicides Among Drug-Related Deaths,
by City, Survey 1 (N=2000) and Survey 2 (N=1004)

| Surveys: | Percent of drug-related deaths classified as homicides | | | | | | | | |
	Chi-cago	Cleve-land	Dal-las	Los Ang.	Mi-ami	New York	Phila.	San Fran.	Wash. D.C.
SURVEY 1	16.6%	6.6%	--	1.3%	0.7%	1.5%	36.2%	3.2%	28.0%
Number [a]	(295)	(150)	(100)	(300)	(151)	(405)	(199)	(250)	(150)
SURVEY 2	14.8%	7.2%	--	--	5.0%	5.8%	15.5%	4.8%	28.0%
Number[a]	(128)	(69)	(61)	(144)	(80)	(240)	(103)	(104)	(75)
COMBINED	16.1%	6.8%	--	0.9%	2.2%	3.1%	29.1%	3.7%	28.0%
Total Number[a]	(423)	(219)	(161)	(444)	(231)	(645)	(302)	(354)	(225)

[a] Numbers represent bases on which percentages were calculated.

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Chapter 12

Discussion and Conclusions

This concluding chapter is an attempt to look at the larger implications of a national survey of drug abuse deaths, the results of which have been summarized in chapter 1 and described in detail in the remainder of this volume. What do the results suggest about the relationship between drug abuse deaths and the overall problem of drug abuse? What do the findings indicate about the established information system of coroners and medical examiners? And, finally, what conclusions can be drawn from this study that will be helpful in future attempts to study drug-involved deaths on a national basis?

The surveys indicate that the two drug types responsible for most deaths were opiates and barbiturates, with opiates responsible for twice as many fatalities as barbiturates. As with any other tragic event, one looks for "blame" or responsibility for the cause. It is not possible from the design of this study to assign responsibility for the dissemination of opiates and barbiturates. The extent to which substances implicated in the deaths were obtained through physicians and hospitals was not learned, although that might be an important area of investigation, if feasible, in future studies. The present study did note, however, that there was frequent use of psychoactive drugs by victims in the two weeks prior to death, which implies wide availability of such substances. The pervasiveness of drugs themselves, for both medical and nonmedical purposes, must play a role in the incidence of drug-involved deaths.

In looking for the implications of the data about the major types of substances involved in drug abuse deaths, it must be kept in mind that the cases selected for study consisted only of those which came to the attention of authorities empowered to investigate deaths, not those cases routinely handled within the medical community. This same caveat applies in attempting to explain major modes of death. Since accidental and suicidal deaths are the very situations that mandate the services of medical examiners, it is not surprising that the most frequent mode was accidental death and the second most frequent mode was suicide. The large proportion of cases unknown as to mode should not be considered a particularly unusual phenomenon, considering the many potential uncertainties in these cases. The large number of "unknowns" does, however, present a major obstacle to full knowledge of drug-involved deaths. The fact that

the proportion of unknowns was much larger in some cities than in others implies that conceptions, techniques, and/or procedures are not consistent or widely shared among medical examiners' offices. As long as this clouded situation exists, the national picture will not be a clear one; to what extent it can be clarified is a question for future research and debate.

The facts about the drug-involved cases as persons come mainly from tabulations of their characteristics (and the circumstances surrounding their deaths) in two- or three-way classifications, Data analysis could have continued past the point reached in the preceding chapters, but fine tabulations turned out to have such small numbers of cases in some cells that reliable comparisons were not possible. Multivariate analyses might show whether or not certain clusters of characteristics discriminate strongly among groups of cases. As mentioned in chapter 2, the data tapes are available for further analysis to interested scholars through the Drug Abuse Epidemiology Center at Texas Christian University.

Visual inspection of the tables suggests that there are organizing principles in the data. Drug types or classes appeared to discriminate rather strongly among the cases, especially the narcotic drugs in contrast to the other types. The persons who died from narcotic drugs were more likely than others to be young, male, and black. Deaths involving barbiturates were more likely than others to be suicidal, and were typified by whites, females, and older persons.

Intercity differences in victims' characteristics were not as prominent as differences in drug type and mode of death. The city variations that did appear probably reflected differences in population characteristics, such as the relatively larger older population of Miami, and relatively larger black population of Washington, D.C. More significantly, the proportion of "unknowns" as to mode of death, mentioned earlier, did vary decidedly among cities. It is hard to believe that the cases themselves were more difficult to analyze in some cities than in others, and therefore it is hypothesized that other local conditions were responsible.

Turning to what was learned about procedures in this study, it was heartening to note that on-site investigations were a widespread practice, that toxicology laboratories were used as the preferred source of information, and that the majority of postmortem examinations were conducted by physicians with Board certification in pathology. Conversely, there was widespread variation among cities with respect to certain other practices, not all of which are essential to good decisions. Two of these practices, fingerprinting and quantitation of drugs, are no doubt limited in some offices because of budgetary constraints.

More serious questions can be raised about the proficiency of toxicological examinations. The results of the proficiency testing and the range in number of drugs tested in each case create considerable doubt about the reliability of data on numbers of deaths attributed to a certain drug or classified as "unknown." This is

especially troublesome at a time when polydrug use is increasing. (In this study itself, it was found that deaths due to more than one substance increased as a proportion of all deaths from the first to the second survey.) Polydrug use by the victims makes examination more difficult, and when the possibility is added that some drugs may be missed entirely, the quality of results may be unsatisfactorily low.

It must be remembered that medical examiners' offices and the laboratories that serve them are governed by local and State laws, not by Federal regulations; thus, consistency in procedures cannot be expected. Also, it must be acknowledged that epidemiology is not the primary function of these offices. Their main responsibility is to the executive and judicial branches of their local government, not to science. Nevertheless, the importance of the information produced in these offices argues in the public interest for closer attention to the quality of data.

Local autonomy for medical examiners affects not only the consistency of procedures used to collect data, but also the basic definitions that govern data collection. The definitions of "drug-involved" are not the same in all offices, and the criteria for assigning cases to specific categories are not standard. Even the hiring of additional staff to collect data in specified locations to collate information, as is done in the Federal government's DAWN project, does not guarantee consistency. The initial decisions made by medical examiners and their staff constitute the basic data and their individual decisions prevail. It may be true that a secondary purpose such as epidemiology cannot easily or efficiently be added to a primary purpose such as legal investigation without compromises.

This project has produced a base of unique data on drug-involved deaths in extent of detail not heretofore available in a single study. It has left us unsatisfied in many ways due to inconsistencies in procedures and definitions used in the original process of data collection, and has convinced us there are structural barriers to conducting an ideal survey of these incidents. This study has shown that before further research of this type is planned, it will be necessary to deal with the thorny issues of lack of consistency in methods, definitions, and practices.

The difficulties and dissatisfactions encountered in this study underscore the fact that the epidemiology of drug abuse is a fledgling science. Efforts to improve the definition and classification of drug-involved deaths will benefit the science. But the "bottom line" is always the human factor--preventing deaths and expanding the quality of life. Some of the most poignant findings of this study were the relative youth of the victims and the fact that, except for pulmonary edema, the postmortem findings were largely normal, suggesting how unnecessary is the tragedy of drug abuse deaths. The ultimate goal of research of this type must be to save those who should not yet become statistics.

Appendix A: Reporting Forms

REPORTING FORMS AND CODE SHEETS

SURVEY 1. Form: <u>Report of a Drug-Involved Death</u>

> Code Sheets #2, #3, #5, and #6

SURVEY 2. Form: <u>Reporting From for Drug-Involved Deaths</u>

> Code Sheets #5, #6, and #7

<div align="center">

Survey 1
<u>Report of a Drug-Involved Death</u>

GENERAL INSTRUCTIONS

</div>

In completing this Report of a Drug-Involved Death, keep in mind the following:

(1) This report is concerned with cases in which psychoactive drugs are involved as a primary or contributing cause. Cases where alcohol alone is the cause of death are not pertinent.

(2) In Part V, "Treatment Prior to Death," the section on page 11 refers to treatment for drug ingestion. The section on pages 12 and 13 refers to medication of any kind used in treatment for <u>any</u> reason.*

(3) For cases involving prescriptive drugs or a history of recent treatment, it is desirable to complete pages 12 and 13, reporting any medication taken (if such information is available.)*

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* In this volume, material on pages 11, 12, and 13 of the form appears on page 124.

Format of some pages has been altered to fit page size requirements of the NIDA Research Monograph series.

REPORT OF A DRUG-INVOLVED DEATH
PART I - General

```
DO NOT COMPLETE
NIMH /0 /1 / / / / / / /
       (1-9)
```

1. NAME OF DECEASED (Write unknown if appropriate):

   _____   _____   _____
   Last   First   Middle name or initial

2. LAST KNOWN ADDRESS (See code sheet #1) (Code x̄ on each line when unknown):

   State/ / / County/ / / City/ / / /
       (10-11)   (12-14)   (15-18)

3. PLACE OF DEATH (See code sheet #1) (Code x̄ on each line when unknown):

   State/ / / County/ / / City/ / / /
       (19-20)   (21-23)   (24-27)

4. STANDARD METROPOLITAN STATISTICAL AREA OF ABOVE (See code sheet #2):

   / / / /
   (28-30)

5. CORONERS'/MEDICAL EXAMINERS' FILE NO. (Use last 5 digits only; precede by zeros if less than 5 digits):

   / / / / /
   (31-35)

6. TYPE OF ADMINISTRATIVE SYSTEM: 1.Coroner, elected 2.Coroner, appointed 3.Medical Examiner, elected 4.Medical Examiner, appointed 5.Combination Medical Examiner and Coroner
   6.Other (specify)_____ / /
                                 (36)

7. DATE OF DEATH (Estimate if necessary):

   Month(01-12)/ / / Day(01-31)/ / / Year/ / /
           (37-38)   (39-40)   (41-42)

8. ABOVE DATE: 1.Known 2.Estimated / /
                                     (43)

9. DATE OF DISCOVERY:

   Month(01-12)/ / / Day(01-31)/ / / Year/ / /
           (44-45)   (46-47)   (48-49)

10. DATE PART I FILLED OUT:

   Month(01-12)/ / / Day(01-31)/ / / Year/ / /
           (50-51)   (52-53)   (54-55)

11. TITLE/POSITION OF PERSON(S) FILLING OUT THIS PART (Limit to 2; place x̄ on unused line): 1.Medical Examiner 2.Deputy Medical Examiner 3.Coroner 4.Deputy Coroner 5.Toxicologist 6.Technician 7.Clerk/Secy / /
   8.Other (specify)_____   (56)

                                      / /
                                      (57)

12. AGE OF DECEASED AT LAST BIRTHDAY (Estimate if necessary; precede by zero if less than 10): / / /
                                                   (58-59)

13. RACE OF DECEASED: 01.White 02.Black 03.Puerto Rican 04.Cuban 05.Mexican-American (Chicano) 06.Other Latin-American 07.American Indian 08.Oriental or Asian 09.Other 10.Unknown / / /
                                                   (60-61)

14. SEX OF DECEASED: 1.Male 2.Female / /
                                      (62)

15. MARITAL STATUS OF DECEASED: 1.Never married 2.Legally married 3.Separated 4.Divorced 5.Widowed 6.Unknown 7. Housewife / /
   8. Student 9. Other (specify)   (63)

16. EMPLOYMENT STATUS: 1.Employed 2.Unemployed 3.Unemployed, on welfare 4.Unemployed, welfare status unknown 6.Unknown / /
                                                 (64)

17. PRIMARY CAUSE OF DEATH (Use ICDA code; place x̄ on unused lines):

   / / / / . / / ,E / / / / . / /
           (65-72)

18. CONTRIBUTING CAUSE OF DEATH (Use ICDA code; place x̄ on unused lines):

   / / / / . / / , E / / / / . / /
             (73-80)

```
DO NOT COMPLETE
NIMH /0 /2 / / / / / / /
       (1-9)
```

19. ROLE OF DRUG INVOLVED IN DEATH (See code sheet #3): / / /
                                                        (10-11)

20. Print in chemical, generic, brand, or street name of drugs involved in death and code, using code sheet #4. For each, list Source of Information (1 = Lay informant; 2 = Found at scene; 3 = Physician; 4 = Lab; 5 = Other), Rank In Order of Importance (1 = most), If tied use same rank, Code "5" for each drug if indeterminate, and Route of Administration (1 = Oral; 2 = I.V.; 3 = I.M./S.C.; 4 = Inhalation; 5 = Unknown; 6 = Other (specify)).

Name of drug	Source	Rank	Route
#1 _____	/ / (17)	/ / (18)	/ / (19)
/ / / / / (12-16)			
#2 _____	/ / (25)	/ / (26)	/ / (27)
/ / / / / (20-24)			
#3 _____	/ / (33)	/ / (34)	/ / (35)
/ / / / / (28-32)			
#4 _____	/ / (41)	/ / (42)	/ / (43)
/ / / / / (36-40)			

21. NOTE BELOW THE PROBABLE SOURCE OF EACH DRUG LISTED IN ITEM #20 (Place x̄ on lines below if no drugs were listed in #20): 01.Legal prescription to deceased 02.Non-prescription legal purchase 03.Gift 04.Forged prescription to deceased 05.Stolen from physician 06.Stolen from pharmacy 07.Stolen from wholesaler/mfg. 08.Stolen from other or unknown 09.Street buy 10.Illegal synthesis 11.Unknown 12.Other (specify)_____

    Drug #1/ / / Drug #2/ / / Drug #3/ / / Drug #4/ / /
         (44-45)   (46-47)   (48-49)   (50-51)

22. NOTE FORM IN WHICH EACH OF DRUGS IN #20 WERE FOUND OR PROBABLY USED (Place x̄ on lines below if no drugs were listed in #20): 01.Tablet 02.Capsule 03.Liquid (oral) 04.Liquid (injectable) 05.Powder 06.Paper 07.Cigarette (or smoking substance) 08.Food substance 09.Unknown 10.Other (specify)_____

    Drug #1/ / / Drug #2/ / / Drug #3/ / / Drug #4/ / /
         (52-53)   (54-55)   (56-57)   (58-59)

23. ESTIMATE COST OF EACH DRUG DOSE NAMED IN ITEM #20 IN DOLLARS (Precede by zero(s) if 3 digits not used; code x̄ if no basis for estimate): Drug #1/ / / /
                                                        (60-62)
    Drug #2/ / / / Drug #3/ / / / Drug #4/ / / /
         (63-65)   (66-68)   (69-71)

24. WAS DECEASED CURRENTLY ENROLLED IN A TREATMENT OR REHABILITATION PROGRAM? 1.Yes, Methadone 2.Yes, Methadone Detoxification 3.Yes, Other (specify)_____

    4.No 5.Unknown / /
                     (72)

25. DECEASED RECEIVED HOSPITALIZATION AND/OR MEDICAL ATTENTION JUST PRIOR TO DEATH: 1.Yes 2.No 3.Unknown (prior = up to 10 weeks) / /
                                                    (73)

26. WERE THE FOLLOWING PERFORMED? (1.Yes 2.No)

    On-site investigation / /
                           (74)

    Autopsy / /
             (75)

    Toxicological Examination / /
                               (76)

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DO NOT COMPLETE
NIMH / 0/ 3/ / / / / / / /
(1-9)

1. ON-SITE INVESTIGATION PERFORMED: 1.Yes 2.No /__/ (10)
3.Unknown, (If "No" or "Unknown", go to Part
III).

2. DATE PART II FILLED OUT:

Month(01-12)/__/__/ (11-12) Day(01-31)/__/__/ (13-14) Year/__/__/ (15-16)

3. INVESTIGATION CONDUCTED BY (Choose no more than /__/__/ (17-18)
2; place X on unused line): 01.Police Officer,
trained in this field 02.Police Officer, other
03.Physician, non-Pathologist 04.Physician,
trained in pathology 05.Coroner (M.D.) /__/__/ (19-20)
06.Coroner (non-M.D.) 07.Deputy Coroner (M.D.)
08.Deputy Coroner (non-M.D.) 09.Medical Exam-
iner 10.Deputy Medical Examiner 11.Coroner's
or Medical Examiner's Investigator and none of
the above
12.Other (specify):

4. PERSON FILLING OUT PART II: 1.Person conducting /__/ (21)
investigation (same as #2) 2.Medical Examiner
3.Deputy Medical Examiner 4.Coroner 5.Deputy
Coroner 6.Technician 7.Clerk/Secy
8.Other (specify):

5. EVENTS SURROUNDING DEATH FIRST REPORTED BY: /__/ (22)
1.Police 2.Family member of deceased
3.Acquaintance/friend of deceased 4.Non-
involved bystander 5.Attending physician
6.Other medical personnel 7.Unknown
8. Other (specify)

6. DECEASED DIED AT SITE 1.Yes or probably /__/ (23)
2.No 3.Unknown OF DISCOVERY:

7. BODY FINGERPRINTED: 1.Yes 2.No /__/ (24)

8. BODY EVIDENCED EXTERNAL INJURIES FROM THE /__/__/ (25-26)
FOLLOWING (Limit to 5; code X on unused lines):
01.No external evidence 02.Bullet 03.Stabbing
or cuts 04.Blunt instrument 05.Hatchet or
similar device 06.Strangulation 07.Thermal /__/__/ (27-28)
burns 08.Chemical burns 09.Electrical burns
10.Explosion 11.Crushing
12.Other (specify): /__/__/ (29-30)

/__/__/ (31-32)

/__/__/ (33-34)

9. DECEASED HAD BEEN INVOLVED IN MOTOR VEHICLE /__/ (35)
ACCIDENT: 1.Yes 2.No 3.Unknown

10. BODY SHOWED EXTERNAL EVIDENCE OF POISON OR /__/ (36)
DRUG INGESTION (Limit to 2; place X on unused
lines): 1.None 2.Needle marks 3."Trackmarks"
4.Other (specify): /__/ (37)

5. Unknown

11. EVIDENCE OF DRUG USAGE AT SCENE (Needles, vials, /__/ (38)
etc.): 1.None 2.Toxicology on external evi-
dence gathered at scene 3.Needles, vials, etc.
4.Other (specify):

5. Unknown

12. BODY SHOWED DISCOLORATION FROM POSSIBLE /__/ (39)
INGESTION OF FOREIGN SUBSTANCE (e.g. drugs):
1.Yes 2.No

13. DID THIS INVESTIGATION SUGGEST THE POSSIBIL- /__/ (40)
ITY OF SUICIDE? 1.Yes 2.No (If yes, please
complete Part VI).

14. DID THIS INVESTIGATION SUGGEST THE POSSIBIL- /__/ (41)
ITY OF HOMICIDE? 1.Yes 2.No

15. LIST ANY PSYCHOACTIVE DRUGS, EVIDENCE OF
WHICH WAS FOUND AT SCENE (List no more than 10 -
Place X on unused lines). Print in chemical,
generic, brand, or street name of drugs found.
Also code if possible, using code sheet #4. If
no drugs found place X on first line only.

a. _____   f. _____
/__/__/__/__/__/ (42-46)   /__/__/__/__/__/ (67-71)

b. _____   g. _____
/__/__/__/__/__/ (47-51)   /__/__/__/__/__/ (72-76)

c. _____   DO NOT COMPLETE
/__/__/__/__/__/ (52-56)   NIMH /0 /4 / / / / / / / /
(1-9)

d. _____   h. _____
/__/__/__/__/__/ (57-61)   /__/__/__/__/__/ (10-14)

e. _____   i. _____
/__/__/__/__/__/ (62-66)   /__/__/__/__/__/ (15-19)

j. _____
/__/__/__/__/__/ (20-24)

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REPORT OF A DRUG-INVOLVED DEATH
PART III - Toxicological Examination

```
DO NOT COMPLETE
NIMH/0 /5 / / / / / / /
          (1-9)
```

1. DATE PART III FILLED OUT: Month(01-12)/ / / Day(01-31)/ / / Year/ / /
                                        (10-11)   (12-13)   (14-15)

2. TITLE/POSITION OF PERSON FILLING OUT THIS REPORT: 1.Medical Examiner 2.Deputy Medical Examiner 3.Coroner 4.Deputy
   Coroner 5.Toxicologist 6.Technician 7.Clerk/Secy 8.Other (specify)_____ / /
                                                                                                (16)

3. WEIGHT OF DECEASED IN KILOGRAMS OR POUNDS AND CIRCLE WHICH (Estimate if necessary; precede by zero if less than
   100):
            / / / /   KILOGRAMS   POUNDS
             (17-19)   (circle one of the above)

4. ABOVE WEIGHT: 1.Known 2.Estimated   / /
                                           (20)

Document the below listed substances according to whether <u>screened for</u>, <u>location studied</u>, and <u>results</u>.
Report negative findings.

	Blood	Urine	Bile	Liver	Lung	Kidney	Stomach Contents	Other (specify on back of form)
5. Drug screen, direct 1. Tested, positive (drug(s) tentatively identified) 2. Tested, negative (no drug(s) found) 3. Not tested Analytic method used (see code sheet #6) / / / (29-30)	/ / (21)	/ / (22)	/ / (23)	/ / (24)	/ / (25)	/ / (26)	/ / (27)	/ / (28)
6. Drug screen after acid extraction 1. Tested, positive 2. Tested, negative 3. Not tested Analytic method used (see code sheet #6) / / / (39-40)	/ / (31)	/ / (32)	/ / (33)	/ / (34)	/ / (35)	/ / (36)	/ / (37)	/ / (38)
7. Drug screen after alkaline extraction 1. Tested, positive 2. Tested, negative 3. Not tested Analytic method used (see code sheet #6) / / / (49-50)	/ / (41)	/ / (42)	/ / (43)	/ / (44)	/ / (45)	/ / (46)	/ / (47)	/ / (48)
8. Drug screen after neutral extraction 1. Tested, positive 2. Tested, negative 3. Not tested Analytic method used (see code sheet #6) / / / (59-60)	/ / (51)	/ / (52)	/ / (53)	/ / (54)	/ / (55)	/ / (56)	/ / (57)	/ / (58)
9. Drug screen, amphoterics 1. Tested, positive 2. Tested, negative 3. Not tested Analytic method used (see code sheet #6) / / / (69-70)	/ / (61)	/ / (62)	/ / (63)	/ / (64)	/ / (65)	/ / (66)	/ / (67)	/ / (68)
10. Alcohol and other volatiles 1. Tested, positive 2. Tested, negative 3. Not tested Analytic method used (see code sheet #6) / / / (79-80)	/ / (71)	/ / (72)	/ / (73)	/ / (74)	/ / (75)	/ / (76)	/ / (77)	/ / (78)

```
DO NOT COMPLETE
NIMH/ 0/6 / / / / / / /
            (1-9)
```

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REPORT OF A DRUG-INVOLVED DEATH
PART III - Toxicological Examination
(Continued)

11. Were recovery experiments done in the analytic methods used for determination of concentration of each specific drug and was a correction factor for losses applied in reporting results? 1 Yes 2.No

/__/
(10)

List below by number (see code sheet #4) all drugs found, concentration found, location of discovery, and methods used. Report negative findings for each location by writing zero on proper blank in row following "concentration". If code is "Other (specify)", write both code number and generic name of drug on line. Place x̄ on unused lines - stop when last drug is recorded.

	Blood	Urine	Bile	Liver	Lung	Kidney	Stomach Contents	Other (specify on back of form)

12. Drug

(name)
/__/__/__/__/__/
(11-15)

Location studied
1.Yes 2.No (16) (17) (18) (19) (20) (21) (22) (23)

Concentration (give in ug/ml; otherwise specify units; code decimal point as "x̄"). (24-27) (28-31) (32-35) (36-39) (40-43) (44-47) (48-51) (52-55)

Extraction method used (see code sheet #5) (56-57) (58-59) (60-61) (62-63) (64-65) (66-67) (68-69) (70-71)

DO NOT COMPLETE
NIMH/ 0/ 7/ /__/__/__/__/__/
(1-9)

pH of aqueous layer (10-11) (12-13) (14-15) (16-17) (18-19) (20-21) (22-23) (24-25)

Analytic method used (see code sheet #6) (26-27) (28-29) (30-31) (32-33) (34-35) (36-37) (38-39) (40-41)

13. Drug

(name)
/__/__/__/__/__/
(42-46)

Location studied
1.Yes 2.No (42) (43) (44) (45) (46) (47) (48) (49)

DO NOT COMPLETE
NIMH/ 0/ 8/ /__/__/__/__/
(1-9)

Concentration (give in ug/ml; otherwise specify units; code decimal point as "x̄"). (10-13) (14-17) (18-21) (22-25) (26-29) (30-33) (34-37) (38-41)

Extraction method used (see code sheet #5) (42-43) (44-45) (46-47) (48-49) (50-51) (52-53) (54-55) (56-57)

pH of aqueous layer (58-59) (60-61) (62-63) (64-65) (66-67) (68-69) (70-71) (72-73)

DO NOT COMPLETE
NIMH/ 0/ 9/ /__/__/__/__/
(1-9)

Analytic method used (see code sheet #6) (10-11) (12-13) (14-15) (16-17) (18-19) (20-21) (22-23) (24-25)

* Report total amount of drug recovered from stomach contents.

NOTE: Sections 14 - 21, the same as sections 12 and 13, are not shown.

REPORT OF A DRUG-INVOLVED DEATH
PART IV - Post Mortem Findings

DO NOT COMPLETE
NIMH/ 2/2 / / / / / / / / /
(1-9)

1. POST MORTEM EXAMINATION PERFORMED: 1.Yes 2.No
(If no, please rpcead to Part V).
/__/ (10)

2. PERSON FILLING OUT PART IV: 1.Person performing
PM exam 2.M.D. - other 3.Coroner or Deputy
Coroner - non M.D. 4.Technician 5.Clerk/Secy
Investigator 7.Other (specify)
/__/ (11)

3. PERSON PERFORMING PM EXAMINATION WAS: Board
certified in forensic pathology 2.M.D., Board
certified in pathology 3.M.D., some formal
training in pathology 4.M.D., no formal train-
ing in pathology 5.Non - M.D. 6.Unknown
/__/ (12)

4. POST MORTEM EXAMINATION: 1.Complete autopsy
(all systems, head and cavities) 2.Complete
autopsy excluding head 3.Partial autopsy
4.External examination only
5.Other (specify)_____
/__/ (13)

5. LOCATION OF EXAMINATION: 1.City or county
morgue 2.Hospital 3.Funeral home or mortuary
4.Other (specify)
/__/ (14)

6. APPROXIMATE TIME BETWEEN DEATH AND PM EXAM-
INATION:

Hours (01-24)/ / / Days/ / / Weeks (00-99)/ / /
(15-16)   (17-18)   (19-20)

7. HISTOLOGY METHODS USED (Limit to 2 choices;
place x̄ on unused lines): 1.None 2.Not known
3.Hemotoxylin and Eosin Stain (H & E)
4.Polarized Light 5.Both Hemotoxylin and Eosin
and Polarized Light
/__/ (21)
6.Other (specify)_____
/__/ (22)

8. BACTERIOLOGY METHODS USED (Limit to 3; place
x̄ on unused lines): 1.No bacteriology
2.Blood culture negative 3.Blood culture
positive (specify organism):
/__/ (23)
_____
/__/ (24)

4.Lung culture negative 5.Lung culture positive /__/ (25)
(specify organism):

6. Other culture, negative (specify specimen and organism)
7.Other culture, positive (specify specimen
and organism):

_____

8.Other bacteriological method (specify):

_____

9. POST MORTEM CHEMICAL, HEMATOLOGIC, OR IMM-
UNOLOGIC STUDIES DONE: 1.Yes 2.No
(specify):
/__/ (26)

_____

10. X - RAYS TAKEN? 1.Yes 2.No
/__/ (27)

11. CLOTHES OF DECEASED STUDIED? 1.Yes 2.No
/__/ (28)

12. BODY WAS: 1.Embalmed 2.Decomposed 3.Em-
balmed and decomposed 4.Neither of above
5.Unknown
/__/ (29)

13. FINDINGS: EXTERNAL AND SKIN: (Choose no
more than 6; place x̄ on unused lines):
01.Not studied 02.Normal 03.Froth around
nose or mouth 04."Tracks" - with recent
hemorrhage 05."Tracks" - without recent
hemorrhage 06.Pigmented scars 07.Tattoos
/__/__/ (30-31)
/__/__/ (32-33)

08.Atrophic scars 09.Scars in jugular area
10.Scars on wrists or forearm 11.Subcut-
aneous fibrosis 12.Starch or talc deposits
13.Subcutaneous abscesses 14.Jaundice
15.Cigarette burns 16.Bruises, abrasions,
or contusions 17.Other burns 18.Other
trauma 19.Other pathology related to drug
use (specify):
/__/__/ (34-35)
/__/__/ (36-37)
/__/__/ (38-39)
/__/__/ (40-41)

14. FINDINGS: VASCULAR SYSTEM (Excluding heart):
(Choose no more than 3; place x̄ on unused lines):
1.Not studied 2.Normal 3.Perivascular
inflammation 4.Angiitis 5.Thrombosis
6.Sclerosis 7.Necrotizing angiitis
8.Other pathology related to drug use (specify):
/__/ (42)
/__/ (43)
/__/ (44)

9.Other pathology not related to drug use
(specify):

15. FINDINGS: HEART: (Choose no more than 3;
place x̄ on unused lines: 1.Not studied
2.Normal 3.Right ventricular dilation
4.Endocarditis right 5.Endocarditis, left
6.Trauma 7.Other pathology related to drug
use (specify):
/__/ (45)
/__/ (46)

8.Other pathology not related to drug use
(specify):
/__/ (47)

16. FINDINGS: RESPIRATORY SYSTEM: (Choose no
more than 6; place x̄ on unused lines):
01.Not studied 02.Normal 03.Inflammation
or perforation of nasal septum 04.Milk
aspiration 05.Aspiration of gastric contents
06.Foam filling tracheobronchial tree
07.Acute pulmonary edema 08.Pneumonia
09.Tobacco staining (green-brown mottling)
10.Lung abcess 11.Pleural 12.TB 13.Starch
or talc 14.Trauma 15.Other pathology
related to drug use (specify):
/__/__/ (48-49)
/__/__/ (50-51)
/__/__/ (52-53)
/__/__/ (54-55)

★ 11. Pleural effusion
16.Other pathology not related to drug use
(specify):
/__/__/ (56-57)
/__/__/ (58-59)

17. FINDINGS: LIVER: (Choose no more than 3;
place x̄ on unused lines): 01.Not studied
02.Normal 03.Hepatomegaly (more than 2000 gm)
04.Chronic portal inflammation 05.Portal
fibrosis 06.Perivascular fibrosis 07.Cirr-
hosis, postnecrotic 08.Acute viral hepatitis
09.Granuloma formation 10.Nutritional fatty
liver 11.Portal lymphadenopathy 12.Trauma
13.Starch or talc deposits 14.Other pathology
related to drug use (specify):
/__/__/ (60-61)
/__/__/ (62-63)
/__/__/ (64-65)

15.Other pathology not related to drug use
(specify):

_____

REPORT OF A DRUG-INVOLVED DEATH
Part IV - Post Mortem Findings
(Continued)

18. FINDINGS: SPLEEN: (Choose no more than 3;
place x on unused lines): 1.Not studied /_/ (66)
2.Normal 3.Splenomegaly (more than 250 gm)
4.Prominent lymphoid tissue 5.Septic soft- /_/ (67)
ening 6.Granulomata 7.Other pathology
related to drug use (specify): /_/ (68)

8.Other pathology not related to drug use
(specify):

_____

19. FINDINGS: LYMPH NODES: (Choose no more than
3; place x on unused lines): 1.Not studied /_/ 69
2.Normal 3.Peripheral lymphadenopathy
4.Hyperplasia 5.Thymus gland enlarged
6.Thymus gland not found 7.Trauma /_/ 70
8.Other pathology related to drug use
(specify): /_/ 71

9.Other pathology not related to drug use
(specify):

_____

20. FINDINGS: NERVOUS SYSTEM: 1.Not studied
2.Normal 3.Pathology present - not likely /_/ 72
to be related to drug use 4.Pathology
present - may be due to drug use (specify):

_____

21. FINDINGS: GENITOURINARY SYSTEM: (Choose no
more than 2; place x on unused lines): 1.Not
studied 2.Normal 3.Pregnant 4.Reproduc- /_/ 73
tive organs missing 5.Pathology present -
probably not related to drug use 6.Pathology
present - may be related to drug use (speci- /_/ 74
fy):

_____

22. FINDINGS: ENDOCRINE SYSTEM: 1.Not studied
2.Normal 3.Pathology present - probably /_/ 75
not related to drug use 4.Pathology present
- may be related to drug use (specify):

_____

23. FINDINGS: MUSCULOSKELETAL SYSTEM: (Choose no
more than 2; place x̄ on unused lines): 1.Not
studied 2.Normal 3.Pathology present - /_/ 76
probably not related to drug use 4.Pathology
present - may be related to drug use
(specify): /_/ 77

_____

5.Trauma

24. EVIDENCE OF SYSTEMIC INFECTION? 1.Yes 2.No /_/ 78

25. EVIDENCE OF MALNUTRITION? 1.Yes 2.No /_/ 79

26. IMPRESSION OF GENERAL HEALTH OF DECEASED: /_/ 80
1.Good 2.Fair 3.Poor

DO NOT COMPLETE
NIMH #/ 2/ 8/ /_/_/_/_/_/_/
(1-9)

27. FINDINGS: GASTROINTESTINAL SYSTEM:
(Choose no more than 3; place x on /_/_/ (10-11)
unused lines): 01.Not studied
02.Normal 03.Pill or other drug-
related residue found 04.Hemorrhage /_/_/ (12-13)
05.Gastritis 06.Peritonitis
07.Perforation 08.Corrosive effects
09.Trauma 10.Other (specify): /_/_/ (14-15)

_____

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REPORT OF A DRUG-INVOLVED DEATH
PART V - TREATMENT PRIOR TO DEATH

```
DO NOT COMPLETE
NIMH # /2 /3 / / / / / / /
          (1-9)
```

1. DECEASED GIVEN TREATMENT JUST PRIOR TO DEATH: 1. Yes 2. No 3. Unknown (If "no", or   /_/
   "unknown," please go to Part VI.)   (10)

2. IF YES, DECEASED TREATED AT: (Select no more than 3; place x̄ on unused lines) 1. Home   /_/
   2. Dwelling or other 3. Dr.'s office 4. Emergency room 5. Hospital 6. Location not   (11)
   known 7. Other (specify)_____

      /_/
      (12)

      /_/
      (13)

3. PERSON COMPLETING PART V: 1. M.E. or Coroner - M.D. 2. Deputy M.E. or Coroner - M.D.
   3. Coroner, non - M.D. 4. Deputy Coroner - non M.D. 5. M.D., not connected with Office   /_/
   of Coroner or M.E. 6. Technician 7. Clerk/Secy 8. Other (specify)_____   (14)

4. LENGTH OF TIME BETWEEN LAST DRUG INGESTION AND START OF TREATMENT - IN HOURS - (Estimate,
   if necessary - preface by zero if less than 10 hours - use "x̄x̄" if unknown).   /_/_/
      (15-16)

5. DECEASED TREATED FOR ACUTE DRUG INVOLVEMENT BY: (Select no more than 3; place x̄ on unused   /_/
   lines). 1. Spouse or other family member 2. Friend 3. Ambulance attendant 4. Nurse   (17)
   5. Physician 6. Self 7. Other (specify)_____

      /_/
      (18)

      /_/
      (19)

6. DURATION OF TREATMENT: (Code x̄ on first line if unknown; place x̄ on unused lines):

   Weeks (0-9+) /_/   Days (0-7) /_/   Hours (00-23) /_/_/ (If less
         (20)   (21)   (22-23)
   than one hour, code 01)

7. TYPES OF MANAGEMENT: (Select no more than 3; place x̄ on unused lines): 1. Vomiting   /_/
   2. Gastric lavage 3. Administration of medication 4. Assisted respiration (e.g. -   (24)
   Intermittent Positive Pressure Breathing) 5. Endotracheal tube or tracheostomy
   6. Dialysis 7. Treated, but type unknown 8. Observation   /_/
      (25)
   9. Other (specify) _____   /_/
      (26)

8. COMPLICATIONS DURING TREATMENT: (Select no more than 3; place x̄ on unused lines):
   01. None 02. Complication occurred, but nature unknown 03. Venous pressure elevated   /_/_/
   04. Aspiration 05. Cardiac arrhythmia 06. Anuria 07. Hypotension 08. Hypertension   (27-28)
   09. Convulsions 10. Asphyxia 11. Acidosis 12. Alkalosis 13. Other (specify)
      /_/_/
   _____   (29-30)

      /_/_/
      (31-32)

List all medications (including patent medicines) known to have been given or taken within two
weeks of death. Use x̄ if a medication was taken but its name and circumstances were unknown;
print the full name of the medicine; give dosage in mg. if possible; otherwise, give in appro-
priate units by weight; use both trade name and chemical name, if known. If medicine is to be
coded by person filling out form, use code sheet #4.

Last known dosage level in mg. (Precede by zeros if less than 4 digits)	Frequency of dosage in times per day (Precede by zero if less than 2 digits)	How administered? 1.Oral 2.I.V. 3.I.M. 4.S.C. 5.Rectal 6.Other	Time before death last dose administered in hours (Precede by zeros if less than 3 digits

9. Medication

_____

/_/_/_/_/_/   /_/_/_/_/   /_/_/_/   /_/_/   /_/_/_/_/
 (32-36)   (37-40)   (41-42)   (43)   (44-46)

10. Medication

/_/_/_/_/_/   /_/_/_/_/   /_/_/_/   /_/_/   /_/_/_/_/
 (47-51)   (52-55)   (56-57)   (58)   (59-61)

NOTE: Sections 11 - 18, the same as sections 9 and 10, are not shown.

DO NOT COMPLETE
NIMH # /2 /6 / / / / / / / /
    (1-9)

1. THIS DEATH WAS: 1.Definitely suicide 2.Probably suicide 3.Possibly suicide 4.Listed as acciden-tal, but "suspicious" 5.Listed as other than suicide 6.Not suicide 7.Unknown /__/ (10)

2. PERSON FILLING OUT THIS PART IS: (Limit to 3; place x̄ on unused lines): 01.Medical Examiner 02.Deputy Medical Examiner 03.Coroner - M.D. 04.Coroner - non - M.D. 05.Deputy Coroner - M.D. 06.Deputy Coroner - non - M.D. 07.Tox-icologist 08.Policeman 09.Investigator (none of above) 10.Technician 11.Clerk/Secy 12.Other (specify) /__/__/ (11-12) /__/__/ (13-14) /__/__/ (15-16)

3. PRINCIPAL PHYSICAL METHOD RELATED TO THE DEATH: 01.Oral ingestion 02.Intravenous injection 03.Subcutaneous or intramuscular injection 04.Sniffing or inhalation 05.Gunshot wound 06.Cutting 07.Hanging 08.Jumping from a height 09.Jumping in front of a vehicle 10.Drowning 11.Motor vehicle accident 12.Electric shock 13.Burning 14.Unknown 15.Other (specify) /__/__/ (17-18)

4. HOMICIDE OR HOMICIDAL ATTEMPT WAS COMBINED WITH THIS SUICIDE: 1.Yes 2.No 3.Unknown /__/ (19)
    ## 4. Not applicable

5. SUICIDE NOTE WAS FOUND AT THE SCENE OF DEATH: 1.Yes 2.No 3.Unknown /__/ (20)

6. DRUGS OR EMPTY DRUG CONTAINERS WERE FOUND AT THE SCENE OF DEATH: 1.Yes 2.No 3.Unknown /__/ (21)

7. PERSON WHO WAS THE PRINCIPAL INFORMANT 1.Spouse 2.Boyfriend or girlfriend 3.Close relative (parent or child) 4.Friend or co-worker 5.Business contact (include hotel manager) 6.Casual acquaintance or stranger 7.No in-formant 8.Unknown /__/ (22)
    ## 9. Other (specify)

8. PSYCHOLOGICAL AUTOPSY (EXTENSIVE INTERVIEWS WITH RELATIVES, FRIENDS, CO-WORKERS OF THE DECEASED) WAS PERFORMED: 1.Yes 2.No 3.Un-known /__/ (23)

9. DECEASED WAS KNOWN TO BE DEPRESSED IN THE RE-CENT PAST: 1.Yes 2.No 3.Unknown /__/ (24)

10. LENGTH OF THE MOST RECENT PERIOD OF MENTAL OR EMOTIONAL ILLNESS: 1.Not applicable 2.Less than 24 hours 3. 1-7 days 4. 1-2 weeks 5. 2-4 weeks 6.More than 4 weeks 7.Unknown /__/ (25)

11. DECEASED WAS BEING TREATED FOR MENTAL OR EMOTIONAL ILLNESS: 1.Yes 2.No 3.Unknown /__/ (26)

12. LENGTH OF LAST TREATMENT PERIOD FOR MENTAL OR EMOTIONAL ILLNESS: 1.Not applicable 2.Less than 2 weeks 3. 2-4 weeks 4. 1-3 months 5.More than 3 months 6.Unknown /__/ (27)

13. DECEASED WAS IN PROFESSIONAL CONTACT IN THE THREE MONTHS PRIOR TO DEATH WITH: 1.Non - psychiatric physician 2.Psychiatrist 3.Psy-chologist 4.Social worker 5.Minister 6.School counselor 7.Para - professional "helper" 8.Unknown 9.Other (specify) /__/ (28)

14. TREATMENT MODALITY THAT WAS BEING USED: (Choose no more than 3; place x̄ on unused lines): 01.Antidepressant medication 02.Tranquilizer medication 03.Sedative-hy-notic 04.Stimulant 05.Electroshock therapy 06.Individual psychotherapy 07.Group psychotherapy 08.Hospitalization 09.Un-known 10.Other (specify) /__/__/ (29-30) /__/__/ (31-32) /__/__/ (33-34)

15. IF PREVIOUS SUICIDE ATTEMPTS, METHOD(S) USED FOR MOST OF THEM (Choose no more than 3; place x̄ on unused lines): 01.Oral ingestion 02.Intravenous injection 03.Subcutaneous or I.M. injection 04.Sniffing or inhalation 05.Gunshot wound 06.Cutting 07.Hanging 08.Jumping from a height 09.Jumping in front of a vehicle 10.Drowning 11.Motor vehi-cle accident 12.Electric shock 13.Burning 14.None 15.Unknown 16.Other (specify) /__/__/ (35-36) /__/__/ (37-38) /__/__/ (39-40)

16. STRESSES THAT OCCURRED TO THE DECEASED IN THE PAST SIX MONTHS: (Choose no more than 3; place x̄ on unused lines): 1.Separation or divorce 2.Death 3.Rejection 4.Job 5.Retirement 6.Money 7.Unknown 8.Other (specify) /__/ (41) /__/ (42) /__/ (43)

17. SIGNALS THAT DECEASED PUT OUT: (Choose no more than 3; place x̄ on unused lines): 1.Verbal statements about desirability of death 2.Verbal suicide threats 3.Non-verbal behavior (such as giving away poss-essions) 4.Correspondence 5.Creative writing 6.None 7.Unknown 8.Other (specify) /__/ (44) /__/ (45) /__/ (46)

18. LETHALITY RATING GIVEN IN THE PAST THREE MONTHS: 1.Mild suicide risk 2.Moderate suicide risk 3.Severe suicide risk 4.Rating not done 5.Was or may have been done, but rating unknown 6.Unknown /__/ (47)

19. DECEASED HAD A PREVIOUS PRINCIPAL PSYCHOLOGICAL DIAGNOSIS OF: 1.Neurotic 2.Psychotic 3.Per-sonality disorder 4.Organic brain syndrome 5.Alcoholism 6.Sexual deviation 7.Unknown 8.Other (specify) /__/ (48)

9.Drug addiction or dependence (specify drug) Print in chemical, generic, brand, or street name of drug(s) involved and code, using code sheet #4.

___(name)___   ___(name)___
/__/__/__/__/__/   /__/__/__/__/__/
   (49-53)   (54-58)

/__/__/__/__/__/   /__/__/__/__/__/
   (59-63)   (64-68)

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REPORT OF A DRUG-INVOLVED DEATH
PART VII - Additional Information

DO NOT COMPLETE
NIMH #_12_/7_/_/_/_/_/_/_/_/
    (1-9)

1. PLACE OF BIRTH OF DECEASED: (See code sheet #1; use x̄ if unknown.

   State /_/_/   County /_/_/_/   City /_/_/_/_/
        (10-11)   (12-14)   (15-18)

2. PERSON FILLING OUT THIS PART IS: (Limit is 3; place x̄ on unused lines): 01.Medical Examiner   /_/_/
   02.Deputy Medical Examiner 03.Coroner - M.D.   (19-20)
   04. Coroner - non - M.D. 05. Deputy Coroner,   /_/_/
   M.D. 06.Deputy Coroner, non - M.D.   (21-22)
   07.Toxicologist 08.Policeman 09.Investigator
   (none of above) 10.Technician 11.Clerk/Secy   /_/_/
   12. Other (specify)_____   (23-24)

3. DID DECEASED POSSESS A DRIVER'S LICENSE? IF
   YES, IN WHAT STATE? (See State code). IF NO,   /_/_/
   CODE "88"; IF UNKNOWN, CODE "99".   (25-26)

4. HIGHEST GRADE COMPLETED IN SCHOOL BY DECEASED:
   (Precede by zero if less than 10; use x̄ if   /_/_/
   unknown).   (27-28)

5. HIGHEST GRADE COMPLETED IN SCHOOL BY FATHER OF   /_/_/
   DECEASED: (Precede by zero if less than 10;   (29-30)
   use x̄ if unknown.

6. HIGHEST GRADE COMPLETED IN SCHOOL BY MOTHER OF   /_/_/
   DECEASED: (Precede by zero if less than 10; use (31-32)
   x̄ if unknown.

7. MAIN OCCUPATIONAL CATEGORY OF DECEASED WHEN
   WORKING   (see examples) *   1.Professional   /_/
   2.Semi-professional 3.Skilled 4.Semi-skilled   (33)
   5.Unskilled 6.Student 7.Housewife 8.Never
   employed 9.Unknown

8. WAS DECEASED EVER IN MILITARY SERVICE? 1. No
   2.Unknown 3.Army 4.Navy 5.Air Force   /_/
   6.Marine Corps 7.Coast Guard 8.Other   (34)
   9.Was in service, but branch unknown

9. WAS THE DECEASED TATTOOED? 1.One 2.Two   /_/
   3.Three 4.Four 5.Five or more 6.None   (35)

10. NUMBER OF TIMES DECEASED WAS MARRIED: /_/
    1.One 2.Two 3.Three 4.Four 5.Five or (36)
    more 6.Never married 7.Unknown

11. HOW MANY TIMES WAS DECEASED KNOWN TO HAVE   /_/
    BEEN ARRESTED? 1.One 2.Two 3.Three   (37)
    4.Four 5.Five or more 6.None 7.Unknown

12. HOW MANY TIMES DID DECEASED SERVE A JAIL TERM?   /_/
    1.One 2.Two 3.Three 4.Four 5.Five or more (38)
    6.None 7.Unknown

13. HOW MANY TIMES WAS DECEASED CONVICTED OF A   /_/
    FELONY? 1.One 2.Two 3.Three 4.Four   (39)
    5.Five or more 6.None 7. Unknown

14. WHAT WERE THE DRINKING HABITS OF THE DECEASED?
    1.Unknown 2.Seldom or never used alcohol   /_/
    3.Was considered to be a "social drinker"   (40)
    4.A moderate drinker 5.A heavy drinker

15. HOW OFTEN DID THE DECEASED SMOKE (TOBACCO)
    CIGARETTES? 1.Never 2.Less than a pack per   /_/
    day 3.A pack or more per day 4. 1-2 packs   (41)
    per day 5. 2+ packs per day 6.Unknown if
    smoked 7.Smoked but amount unknown

16. HOW OFTEN DID THE DECEASED SMOKE CIGARS?
    1. One a day 2. Two a day 3. Three a day   /_/
    4. Four a day 5. Five a day 6. Six a   (42)
    day 7. Never 8. Unknown if smoked
    9. Smoked but amount unknown

17. HOW OFTEN DID THE DECEASED SMOKE A PIPE?
    1. One a day 2. Two a day 3. Three a day   /_/
    4. Four a day 5. Five a day 6. Six a day   (43)
    7. Never 8. Unknown if smoked 9. Smoked
    but amount unknown

18. WHAT WAS THE RELIGIOUS PREFERENCE OF THE
    DECEASED? 1. None 2. Protestant 3. Cath-   /_/
    olic 4. Jewish 5. Buddhist 6. Mohammedan   (44)
    7. Unknown 8. Other (specify)

19. DID THE DECEASED EVER ENGAGE IN ORGANIZED   /_/
    ATHLETICS (BELONG TO A TEAM OR CLUB, ETC.)?   (45)
    1. Yes 2. No 3. Unknown

20. LIVING ARRANGEMENTS OF THE DECEASED
    1. With both parents 2. With mother only   /_/
    3. With father only 4. With other rel-   (46)
    atives 5. With non-relatives 6. Alone
    7. Unknown   8. Other (specify)

21. HOW MANY BROTHERS DID THE DECEASED HAVE?
    1. One 2. Two 3. Three 4. Four 5. Five   /_/
    6. Six 7. Seven or more 8. None   (47)
    9. Unknown

22. HOW MANY SISTERS DID THE DECEASED HAVE?
    1. One 2. Two 3. Three 4. Four 5. Five   /_/
    6. Six 7. Seven or more 8. None   (48)
    9. Unknown

23. BEFORE AGE 12 WITH WHOM DID THE DECEASED LIVE
    MOST OF THE TIME? 1. Both mother and father
    2. Mother only 3. Father only 4. Other   /_/
    relatives 5. Non-relatives 6. Institution   (49)
    7. Other (specify) _____
    8. Unknown

24. WAS DECEASED INVOLVED IN AN INDUSTRIAL ACC-
    IDENT LEADING TO HIS DEATH?   /_/
    1. Yes 2. No 3. Unknown   (50)

                    Examples
*
   Professional: accountant, architect, dentist
                    editor, engineer, commissioned
                    officer in military, physician,
                    (usually requires at least a
                    B.A. degree)

   Semi-professional: air traffic controller,
                    draftsman, dietician, dental
                    hygienist, interior decorator,
                    large store manager

   Skilled: radio announcer, baker, brickman, dental
             assistant, electrician, carpenter

   Semi-skilled: apprentice, bartender, clerk, hostess,
                  nurses aide, presser

   Unskilled: hospital attendant, gasoline station
               attendant, baby-sitter, bellhop,
               caretaker, laborer, farmhand

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LIST OF CODE SHEETS

TO BE USED WITH

SURVEY 1 REPORTING FORM

Report of a Drug-Involved Death

(Coding additions and changes made progressively to accommodate
responses are incorporated into the form reproduced here.)

General Instructions (See page 117)

Code Sheet		Used With Part
#1 *	U. S. States, Counties and Cities	I, VII
#2	Standard Metropolitan Statistical Areas	I
#3	Role of Drug Involved in Death	I
#4 **	DAWN Drug Header (developed by Lea, Inc., published 6 September 1973)	I, II, III, V
#5	Extraction Methods Used	III
#6	Analytic Methods Used	III

* Not included. Available upon request from Department of
  Psychiatry and Human Behavior, College of Medicine,
  University of California, Irvine, CA 92717.

** Not included. For information, write I.M.S. America, Ltd.,
  Ambler, Pennsylvania 19002.

Code	Area	Code	Area
001	Abilene, Texas	060	Dubuque, Iowa
002	Akron, Ohio	061	Duluth-Superior, Minn.-Wis.
003	Albany, Ga.	062	Durham, N.C.
004	Albany-Schnectady-Troy, N.Y.	063	El Paso, Texas
005	Albuquerque,N. Mex.	064	Erie, Pa.
006	Allentown-Bethlehem-Easton,Pa.-N.J.	065	Eugene, Oregon
007	Altoona, Pa.	066	Evansville, Ind.-Ky.
008	Amarillo, Texas	067	Fall River, Mass.-R.I.
009	Anaheim-Santa Ana-Garden Grove, Ca.	060	Fargo-Moorhead, N. Dak.-Minn.
010	Anderson, Ind.	069	Fayetteville, N.C.
011	Ann Arbor, Mich.	070	Fitchburg-Leominister, Mass.
012	Appleton-Oshkosh, Wis.	071	Flint, Mich.
013	Asheville, N.C.	072	Fort Lauderdale-Hollywood, Fla.
014	Atlanta, Ga.	073	Fort Smith, Ark.-Okla.
015	Atlantic City, N.J.	074	Fort Wayne, Ind.
016	Augusta, Ga.-S.C.	075	Forth Worth, Texas
017	Austin, Texas	076	Fresno, Calif.
018	Bakersfield, Ca.	077	Godsden, Ala.
019	Baltimore, Md.	078	Gainesville, Fla.
020	Baton Rouge, La.	079	Galveston-Texas City, Texas
021	Bay City, Mich.	080	Gary-Harmond-East Chicago, Ind.
022	Beaumont-Port Arthur-Orange, Texas	081	Grand Rapids, Mioh.
023	Billings, Mont.	082	Great Falls, Mont.
024	Biloxi-Gulfport, Miss.	083	Green Bay, Wis.
025	Binghamton, N.Y.-Pa.	084	Greensboro-Winston-Salem-HighPoint, N.C.
026	Birminghan, Ala.	085	Greenville, S.C.
027	Bloomington-Normal, Ill.	086	Hamilton-Middletown. Ohio
028	Boise City, Idaho	087	Harrisburg, Pa.
029	Boston, Mass.	088	Hartford, Conn.
030	Brideport, Conn.	089	Honolulu, Hawaii
031	Bristol, Conn.	090	Houston, Texas
032	Brockton, Mass.	091	Huntington-Ashland, W. Va.-Ky.-Ohio
033	Brownsville-Harlingen-San Benito, Texas	092	Huntsville, Ala.
034	Bryan-College Station, Tex.	093	Indianapolis, Inc.
035	Buffalo, N.Y.	094	Jackson, Mich.
036	Canton, Ohio	095	Jackson, Miss.
037	Cedar Rapids, Iowa	096	Jacksonville, Fla.
038	Champaign-Urbana, Ill.	097	Jersey City, N.J.
039	Charleston, S.C.	098	Johnstown, Pa.
040	Charleston, W. Va.	099	Kalamazoo, Mich.
041	Charlotte, N.C.	100	Kansas City, Mo.-Kansas
042	Chattanooga, Tenn.-Ga.	101	Kenosha, Wis.
043	Chicago, Ill.	102	Knoxville, Tenn.
044	Cincinnati, Ohio-Ky.-Ind.	103	La Crosse, Wis.
045	Cleveland, Ohio	104	Lafayette, La.
046	Colorado Springs, Col.	105	Lafayette-West Lafayette, Ind.
047	Columbia, Mo.	106	Lakes Charles, La.
048	Columbia, S.C.	107	Lancaster, Pa.
049	Columbus.Ga.-Ala.	108	Lansing, Mich.
050	Columbus, Ohio	109	Laredo, Texas
051	Corpus Christi, Texas	110	Las Vegas, Nev.
052	Dallas, Texas	111	Lawrence-Haverhill, Mass.-N.H.
053	Danbury, Conn.	112	Lawton, Okla.
054	Davenport-Rock Island-Moline, Iowa-Ill.	113	Lewiston-Auburn, Maine
055	Dation, Ohio	114	Lexington, Ky.
056	Decatur, Ill.	115	Lima, Ohio
057	Denver, Colo.	116	Lincoln, Nebr.
058	Des Moines, Iowa	117	Little Rock-North Little Rock,Ark.
059	Detroit, Mich.	118	Lorain-Elyria, Ohio
		119	Los Angeles-Long Beach, Ca.

Code	Area	Code	Area
120	Louisville, Ky.-Ind.	185	St. Joseph, Mo.
121	Lowell, Mass.	186	St. Louis, Mo.-Ill.
122	Lubbock, Texas	187	Salem, Oregon
123	Lynchburg, Va.	188	Salinas-Monterey, Calif.
124	Mecon, Ga.	189	Salt Lake City, Utah
125	Madison, Wis.	190	San Angelo, Texas
126	Manchester, N.H.	191	San Antonio, Texas
127	Mansfield, Ohio	192	San Bernardino-Riverside-Ontario. Ca.
128	McAllen-Pharr-Edinburg, Texas	193	San Diego, Ca.
129	Memphis, Tenn.-Ark.	194	San Francisco-Oakland, Calif.
130	Meriden, Conn.	195	San Jose, Ca.
131	Miami, Fla.	196	Santa Barbara, Ca.
132	Midland, Texas	197	Santa Rosa, Ca.
133	Milwaukee, Wis.	198	Savannah, Ga.
134	Minneapolis-St. Paul, Minn.	199	Scranton, Pa.
135	Mobile, Ala.	200	Seattle-Everett, Wash.
136	Modesto, Calif.	201	Sherman-Denison, Texas
137	Monroe, La.	202	Shreveport, La.
138	Montgomery, Ala.	203	Sioux City, Iowa-Nebr.
139	Muncie, Ind.	204	Sioux Falls, S. Dak.
140	Muskegon-Muskegon Heights, Mich.	205	South Bend, Ill.
141	Nashua, N.H.	206	Spokane, Wash.
142	Nashville-Davidson, Tenn.	207	Springfield, Ill.
143	New Bedford, Mass.	208	Springfield, Mo.
144	New Britain, Conn.	209	Springfield, Ohio
145	New Haven, Conn.	210	Springfield-Shicopee-Holy Mass.-Conn.
146	New London-Groton-Norwich, Conn.	211	Stamford, Conn.
147	New Orleans, La.	212	Steubenville-Weirton, Ohio-W. Va.
148	New York, N.Y.	213	Stockton, Calif.
149	Newark, N.J.	214	Syracuse, N.Y.
150	Newport News-Hampton, Va.	215	Tacoma, Wash.
151	Norfolk-Portsmouth, Va.	216	Tallahassee, Fla.
152	Norwalk, Conn.	217	Tampa-St. Petersburg, Fla.
153	Odessa, Texas	218	Terre Haute, Ind.
154	Ogden, Utah	219	Texarkana, Tex.-Ark.
155	Oklahoma City, Okla.	220	Toledo, Ohio-Mich.
156	Omaha, Nebr.-Iowa	221	Topeka, Kansas
157	Orlando, Fla.	222	Trenton, N.J.
158	Owensboro, Ky.	223	Tucson, Arizona
159	Oxnard-Ventura, Ca.	224	Tulsa, Okla
160	Paterson-Clifton-Passaic. N.J.	225	Tuscaloosa, Ala.
161	Pensacola, Fla,	226	Tyler, Texas
162	Peoria, Ill.	227	Utica-Rome, N.Y.
163	Petersburg-Colonial Heights. Va.	228	Vallejo-Napa, Calif.
164	Philadelphia, Pa.-N.J.	229	Vineland-Millville-Bridgeton, N.J.
165	Phoenix, Ariz.	230	Waco, Texas
166	Pine Bluff, Ark.	231	Washington, D.C.-Md.-Va.
167	Pittsburgh, Pa.	232	Waterbury, Conn.
168	Pittsfield, Mass.	233	Waterloo, Iowa
169	Portland, Maine	234	West Palm Beach, Fla.
170	Portland, Ore-Wash.	235	Wheeling, W. Vs.-Ohio
171	Providence -Pawtucket-Warwich,	236	Wichita, Kansas
172	Provo-Orem-Utah R.I.-Mass.	237	Wichita Falls, Texas
173	Pueblo, Col.	238	Wilkes-Barre-Hazleton, Pa.
174	Recine, Wis.	239	Wilmington, Del.-N.J.-Md.
175	Raleigh, N.C.	240	Wilmington, N.C.
176	Reading, Pa.	241	Worcester, Mass.
177	Reno, Nevada	242	York, Pa.
178	Richmond. Va.	243	Youngstown-Warren, Ohio
179	Roanoke, Va.		
180	Rochester, Minn.		
181	Rochester, N.Y.		
182	Rockford, Ill.		
183	Sacramento, Calif.		
184	Saginaw, Mich.		

A SCHEMA FOR DEFINING AND CATEGORIZING
DRUG-INVOLVED DEATHS

Sample 1

DRUG-INDUCED

    A. Simple or direct - the drug in question was specifically the cause of death with no other agent playing a significant role.
        01. Accidental or "unexpected"
        02. Suicidal
        03. Homicidal
        04. Unknown

    B. Drug in combination with some other potentiating or synergistic pharmacologic agent, such as alcohol, barbiturates, etc.
        05. Accidental or "unexpected"
        06. Suicidal
        07. Homicidal
        08. Unknown

    C. Idiosyncratic -- an unexpected effect, such as au anaphylatic or immune reaction.
        09. Accidental or "unexpected"

DRUG-RELATED

    D. Drug in combination with some pre-existing and potentially deadly physiological condition, such as diabetes, chronic heart condition, etc.
        10. Accidental or "unexpected"
        11. Suicidal
        12. Homicidal
        13. Unknown

    E. Drug in combination with some physical event outside of the patient's body, each as death by vehicle or gunfire while under the influence, etc.
        14. Accidental or "uexpected"
        15. Suicidal
        16. Homicidal
        17. Unknown

    F. Drug in combination with some medical disorder or diaeaae probably produced by drug abuse, such as hepatitis, bacterial endocarditis, tetanus, etc.
        18. Accidental or "unexpected"
        19. Unknown

REPORT OF A DRUG-INVOLVED DEATH - NIMH Contract No. HSM-42-72-139
(and Supplementary Form for Reporting-Data on Unknown Drug Sample)
Sample 1

CODE SHEET #5 - EXTRACTION MFTHODS USED

01. No extraction used
02. Distillation
03. Direct extraction by ether
04. Direct extraction by chloroform
05. Direct extraction by heptane
06. Extraction by ether after deproteinizing sample
07. Extraction by chloroform after deproteinizing sample
08. Extraction by heptane after deproteinizing sample
09. Ion exchange chromatography
10. Other (specify)

CODE SHEET #6 - ANALYTIC METHODS USED

01. Paper chromatography
02. Thin-layer chromatography
03. Gas-liquid chromatography
04. Absorption chromatography
05. Ultraviolet absorption spectrophotometry
06. Infra-red absorption spectrophotometry
07. Visible absorption spectrophotometry
08. Color test (general and specific)
09. Fluorescence spectrophotometry
10. Mass spectroscopy
11. Immunoassays(RIA)
12. Electron-spin resonance spectroscopy
13. Microcrystal tests
14. Atomic absorption spectroscopy
15. Other (specify)

DRUG ASSAY INSTRUCTIONS
Part III, Items 12-21

DRUG	CONCENTRATION		pH	
	Code	For	Code	For
Prefer generic name in this section	0000 -	Quantitative traces or negative	99 -	Not applicable
	9999 -	Qualitative presence; no measurement	15 -	Not adjusted
			16 -	Physiological

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REPORTING FORM FOR DRUG INVOLVED DEATHS

DO NOT COMPLETE
/ 0/ 1/ , / , / , /
(1-6)

PART I - General

1. NAME OF DECEASED (write "unknown" if appropriate)

_____
Last   First   Middle

2. PERSON(S) FILLING OUT THIS PART (choose no
more than 2): 01.Medical Examiner 02.Deputy/
Asst ME 03.Coroner, M.D. 04.Coroner, non-M.D.
05.Deputy/Asst Coroner, M.D. 06.Deputy/Asst   / , / (7-8)
Coroner, non-M.D. 07.Toxicologist 08.Police-
man 09.Investigator (none of above)
10.Technician 11.Clerk/Secy 12.Other   / , / (9-10)
(specify):
_____

3. DATE PART I FILLED OUT: Month(01-12) / , / (11-12)

                                   Day(01-31) / , / (13-14)

                                   Year / , / (15-16)

4. LAST KNOWN ADDRESS OF DECEASED: (See   State or
Code Sheet #1; indicate county only   nation / , / (17-18)
if city is not on code sheet; when
unknown or inapplicable, fill spaces
with 9's)   U.S.city / , / , / (19-21)
                                  or county

5. PLACE OF DEATH: State or
(See instructions for   nation / , / (22-23)
Item #4 above)

                                    U.S.city / , / , / (24-26)
                                    or county

**6. STANDARD METROPOLITAN STATISTICAL
AREA OF PLACE OF DEATH:**   / , / , / (27-29)
(See Code Sheet #2)

7. CORONER'S/MEDICAL EXAMINER'S FILE NUMBER:
(Use last 5 digits; precede by   / , / , / , / , / (30-34)
zeros if fewer than 5 digits)

8. DATE OF DEATH: Month(01-12) / , / (35-36)
(Estimate if necessary)

                                   Day(01-31) / , / (37-38)

                                   Year / , / (39-40)

9. DATE OF DISCOVERY: Month(01-12) / , / (41-42)

                                   Day(01-31) / , / (43-44)

                                   Year / , / (45-46)

10. AGE OF DECEASED AT LAST BIRTHDAY:
(Estimate if necessary; if younger than
one year old, code to previous tenth of   / , / (47-48)
one year, as directed on Conversion
Table, using "x" as decimal point)

11. RACE OF DECEASED: 01.White 02.Black
03.Puerto Rican 04.Cuban 05.Mexican-
American (Chicano) 06.Other Latin
American 07.American Indian 08.Asian   / , / (49-50)
or Oriental 09.Unknown 10.Other
(specify):
_____

12. SEX OF DECEASED: 1.Male 2.Female
                                               / / (51)

13. CURRENT MARITAL STATUS OF DECEASED:
1.Never married 2.Legally married (include
common law) 3.Separated 4.Divorced   / / (52)
5.Widowed 6.Unknown

14. PRIMARY EMPLOYMENT STATUS OF DECEASED:
1.Employed full-time 2.Employed part-time
3.Unemployed 4.Student 5.Housewife   / / (53)
6.Pre-school age 7.Retired 8.Unknown

**15. WAS DECEASED CURRENTLY RECEIVING WELFARE
SUPPORT?** 1.Yes 2.No 3.Unknown   / / (54)

16. PRIMARY CAUSE OF DEATH (write in and
also use ICDA code)

_____ / , / , / . / / (55-58)
(Diagnosis)   "N"code

_____ / , / , / . / / (59-62)
(External cause, if applicable) "E"code

17. CONTRIBUTING CAUSE OF DEATH (write in
and also use ICDA code):

_____ / , / , / . / / (63-66)
(Diagnosis)   "N"code

_____ / , / , / . / / (67-70)
(External cause, if applicable) "E"code

DO NOT COMPLETE
/ 0/ 2/ , / , / , /
(1-6)

18. ROLE OF DRUG(S) INVOLVED IN THE DEATH:
(Use Code Sheet #3)   / , / (7-8)

19. NAME OF DRUG(S) INVOLVED IN THE DEATH:
(Print generic, brand, or street name of
drugs involved in death and code, using
Code Sheet #4; if more than one is involved,
list in order of their ranked importance as
a cause of death, beginning with the most
important and assessing rank as best you can)

DRUG #1_____ / , / , / , / (9-13)

DRUG #2_____ / , / , / , / (14-18)

DRUG #3_____ / , / , / , / (19-23)

DRUG #4_____ / , / , / , / (24-28)

DRUG #5_____ / , / , / , / (29-33)

**20. SOURCES OF INFORMATION IDENTIFYING DRUG(S)
LISTED IN ITEM #19 ABOVE:** 1.Yes 2.No
3.Unknown

	DRUG#1	DRUG#2	DRUG#3	DRUG#4	DRUG#5
Toxicological exam.	/ / (34)	/ / (35)	/ / (36)	/ / (37)	/ / (38)
Post-mortem exam.	/ / (39)	/ / (40)	/ / (41)	/ / (42)	/ / (43)
Decedent's statement	/ / (44)	/ / (45)	/ / (46)	/ / (47)	/ / (48)
Physician or medical records	/ / (49)	/ / (50)	/ / (51)	/ / (52)	/ / (53)
On-site investigation	/ / (54)	/ / (55)	/ / (56)	/ / (57)	/ / (58)
Lay informant	/ / (59)	/ / (60)	/ / (61)	/ / (62)	/ / (63)
Other (specify):	/ / (64)	/ / (65)	/ / (66)	/ / (67)	/ / (68)

_____

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DO NOT COMPLETE

/ 0/ 3/ /   /   /
     (1-6)

21. NOTE BELOW THE ROUTE OF ADMINISTRATION OF DRUG(S) LISTED IN ITEM #19 ABOVE: 1.Oral 2.I.V. 3.I.M./S.C. 4.Inhalation 5.Unknown 6.Other (specify):

_____

Drug#1 / /
         (7)

Drug#2 / /
         (8)

Drug#3 / /
         (9)

Drug#4 / /
         (10)

Drug#5 / /
         (11)

22. NOTE THE PROBABLE SOURCE OF EACH DRUG LISTED IN ITEM #19: 01.Legal prescription to deceased 02.Legal prescription to other 03.Nonprescription, legal purchase 04.Gift 05.Forged prescription to deceased 06.Stolen from physician 07.Stolen from pharmacy 08.Stolen from wholesaler/mfr 09.Stolen from other or unknown 10.Street buy 11.Illegal synthesis 12.Unknown 13.Other (specify):

Drug#1 /   /   /
        (12-13)

Drug#2 /   /   /
        (14-15)

Drug#3 /   /   /
        (16-17)

Drug#4 /   /   /
        (18-19)

Drug#5 /   /   /
        (20-21)

23. NOTE FORM IN WHICH EACH OF DRUGS LISTED IN ITEM #19 WERE PROBABLY USED: 1.Pill 2.Liquid (oral) 3.Liquid (injectable) 4.Gas or aerosol 5.Powder 6.Cigarette (or smoking substance) 7.Food substance 8.Unknown 9.Other (specify):

_____

Drug#1 / /
        (22)

Drug#2 / /
        (23)

Drug#3 / /
        (24)

Drug#4 / /
        (25)

Drug#5 / /
        (26)

24. WAS DECEASED ENROLLED IN A REHABILITATION OR TREATMENT PROGRAM FOR DRUG ABUSE AT TIME OF DEATH? 1.Yes, methadone detoxification 2.Yes, methadone maintenance 3.Yes, other type of known program 4.Yes, but type unknown 5.No 6.Unknown

/ /
(27)

25. IF RESPONSE TO ITEM #24 ABOVE WAS "NO" OR "UNKNOWN," WHAT WAS DECEASED'S MOST RECENT PERIOD OF ENROLLMENT IN REHAB/TREATMENT PROGRAM FOR DRUG ABUSE? 1.Never 2.Within one month prior to death 3.Between one month and one year prior 4.More than one year prior 5.Enrolled but time unknown 6.Unknown if enrolled

/ /
(28)

26. HOW OFTEN HAD DECEASED PARTICIPATED IN A REHAB/TREATMENT PROGRAM FOR DRUG ABUSE? 1.Once 2.Twice 3.Three or more times 4.At least once but exact number unknown 5.Never 6.Unknown

/ /
(29)

27. WAS DECEASED TREATED FOR DRUG OVERDOSE IMMEDIATELY PRIOR TO DEATH? 1.Yes 2.No 3.Unknown

/ /
(30)

28. DID DECEASED USE DRUGS OR MEDICATIONS (OTHER THAN THOSE LISTED IN ITEM #19 ABOVE) WITHIN 10 WEEKS OF DEATH? 1.Yes 2.No 3.Unknown

/ /
(31)

29. WERE THE FOLLOWING PERFORMED? 1.Yes 2.No 3.Unknown

On-site investigation / /
                       (32)

Post-mortem / /
             (33)

Toxicological examination / /
                          (34)

Psychological autopsy / /
                       (35)

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REPORTING FORM FOR DRUG INVOLVED DEATHS

U.C.I. REPORTING FORM

Part II - Investigation of Events Surrounding Death

DO NOT COMPLETE
/ 0 / 4 / / / / /
(1-6)

1. PERSON(S) FILLING OUT THIS PART (choose no more than 2): 01.Medical Examiner 02.Deputy/Asst ME 03.Coroner, M.D. 04.Coroner, non-M.D. 05.Deputy/Asst Coroner, M.D. 06.Deputy/Asst Coroner, non-M.D. 07.Toxicologist 08.Policeman 09.Investigator (none of above) 10.Technician 11.Clerk/Secy 12.Other (specify): _____ / / (7-8)   / / (9-10)

2. ON-SITE INVESTIGATION PERFORMED: 1.Yes 2.No 3.Unknown   / / (11)

3. ON-SITE INVESTIGATION WAS CONDUCTED BY (choose no more than 2): 01.Police officer, trained in this field 02.Police officer, other 03.Physician, non-pathologist 04.Physician, trained in pathology 05.Medical Examiner 06.Deputy/Asst ME 07.Coroner, M.D. 08.Coroner, non-M.D. 09.Deputy/Asst Coroner, M.D. 10.Deputy/Asst Coroner, non-M.D. 11.Coroner's/ME's investigator 12.Not applicable 13.Unknown 14.Other (specify): _____ / / (12-13)   / / (14-15)

4. EVENTS SURROUNDING DEATH FIRST REPORTED BY: 1.Police 2.Family member of deceased 3.Acquaintance/friend of deceased 4.Non-involved bystander 5.Attending physician 6.Other medical personnel 7.Unknown 8.Other (specify): _____   / / (16)

5. DECEASED DIED AT SITE OF DISCOVERY: 1.Yes 2.No 3.Unknown   / / (17)

6. WAS MOTOR VEHICLE INVOLVED IN THE DEATH? 1.Yes 2.No 3.Unknown   / / (18)

7. WAS INDUSTRIAL ACCIDENT INVOLVED IN THE DEATH? 1.Yes 2.No 3.Unknown   / / (19)

8. WAS BODY FINGERPRINTED? 1.Yes 2.No 3.Unknown   / / (20)

9. WAS CLOTHING OF DECEASED STUDIED? 1.Yes 2.No 3.Unknown   / / (21)

10. BODY EVIDENCED EXTERNAL INJURIES FROM THE FOLLOWING (choose no more than 2): 01.No external evidence 02.Bullet 03.Stabbing or cuts 04.Blunt instrument 05.Hatchet or similar device 06.Strangulation 07.Thermal burns 08.Chemical burns 09.Electrical burns 10.Explosion 11.Crushing 12.A fall 13.Unknown 14.Other (specify): _____   / / (22-23)   / / (24-25)

11. BODY SHOWED EXTERNAL EVIDENCE OF POISON OR DRUG INGESTION (choose no more than 2): 1.None 2.Needle marks 3."Trackmarks" 4.Skin punctures 5.Discharge from nose or mouth 6.Discoloration 7.Other (specify): _____   / / (26)   / / (27)

12. EVIDENCE OF DRUG USAGE AT SCENE (choose no more than 2): 1.None 2.Drugs found at scene 3.Needles, vials, bottles, etc. 4.Unknown 5.Other (specify): _____   / / (28)   / / (29)

13. LIST ANY PSYCHOACTIVE DRUGS, EVIDENCE OF WHICH WAS FOUND AT THE SCENE (list no more than 7; print generic, brand or street name of drugs found; code if possible, using Code Sheet #4):

a. _____   / / / / / (30-34)

b. _____   / / / / / (35-39)

c. _____   / / / / / (40-44)

d. _____   / / / / / (45-49)

e. _____   / / / / / (50-54)

f. _____   / / / / / (55-59)

g. _____   / / / / / (60-64)

14. DID INVESTIGATION OF EVENTS SURROUNDING DEATH SUGGEST OR INDICATE SUICIDE? 1.Yes 2.No 3.No investigation conducted   / / (65)

15. DID INVESTIGATION OF EVENTS SURROUNDING DEATH SUGGEST OR INDICATE HOMICIDE? 1.Yes 2.No 3.No investigation conducted   / / (66)

REPORTING FORM FOR DRUG INVOLVED DEATHS

DO NOT COMPLETE
/ 0/ 5/ / / /
(1-6)

U.C.I. REPORTING FORM

PART III - Toxicological Examination

1. PERSON(S) FILLING OUT THIS PART (choose no more than 2): 01.Medical Examiner
   02.Deputy/Asst ME 03.Coroner, M.D. 04.Coroner, non-M.D. 05.Deputy/Asst
   Coroner, M.D. 06.Deputy/Asst Coroner, non-M.D. 07.Toxicologist 08.Policeman
   09.Investigator (none of above) 10.Technician 11.Clerk/Secy
   12.Other (specify):   / / /
                                                                          (7-8)
   _____   / / /
                                                                          (9-10)

2. WEIGHT OF DECEASED: (Precede with zeros if fewer than 3 digits)   / / / /
                                                                          (11-13)

3. WEIGHT GIVEN IN: 1.Pounds   2.Kilograms   / /
                                                                          (14)

4. IS THE LABORATORY PARTICIPATING IN A REGULAR PROFICIENCY TESTING SERVICE? / /
   1.Yes 2.No   (15)

INSTRUCTIONS FOR ITEMS #5-9 BELOW:

Print the name (and code the number, using Code Sheet #4) of drugs assayed, concentration
found, location of discovery, methods used, and details of screening.

Under CONCENTRATION, report negative findings, traces, and amounts present in measurable
quantities but not quantified as follows:

9999 - negative findings
8888 - traces (amounts detectable but too small to quantify)
7777 - amounts present in measurable quantities but not quantified

Report the CONCENTRATION of ETHANOL as a percentage based on gms/100 ml.

Report EXTRACTION pH as follows where applicable:

99.9 - no extraction
88.8 - pH not adjusted

	Blood	Urine	Bile	Liver	Brain	Kidney	Stomach Contents	Other (Specify location)

5.

(Generic name)
/ / / / /
(16-20)

	(µg/ml)	(µg/ml)	(µg/ml)	(µg/g)	(µg/g)	(µg/g)	(total mg)	(Specify units)
CONCENTRATION: (Write decimal point as "x")	/ / / / (21-24)	/ / / / (25-28)	/ / / / (29-32)	/ / / / (33-36)	/ / / / (37-40)	/ / / / (41-44)	/ / / / (45-48)	/ / / / (49-52)
EXTRACTION METHOD USED: (See Code Sheet #5)	/ / (53-54)	/ / (55-56)	/ / (57-58)	/ / (59-60)	/ / (61-62)	/ / (63-64)	(65-66)	/ / (67-68)

DO NOT COMPLETE
/ 0/ 6/ / / /
(1-6)

EXTRACTION pH:	/ / . / (7-9)	/ / . / (10-12)	/ / . / (13-15)	/ / . / (16-18)	/ / . / (19-21)	/ / . / (22-24)	/ / . / (25-27)	/ / . / (28-30)
ANALYTIC METHOD USED: (See Code Sheet #6)	/ / (31-32)	/ / (33-34)	/ / (35-36)	/ / (37-38)	/ / (39-40)	/ / (41-42)	/ / (43-44)	/ / (45-46)
WAS THIS DRUG TESTED FOR IN A DRUG SCREEN? 1.Tested positive 2.Tested negative 3.Not tested	/ / (47)	/ / (48)	/ / (49)	/ / (50)	/ / (51)	/ / (52)	/ / (53)	/ / (54)
DRUG SCREEN USED: (See Code Sheet #7)	/ / (55)	/ / (56)	/ / (57)	/ / (58)	/ / (59)	/ / (60)	/ / (61)	/ / (62)
ANALYTIC METHOD USED IN SCREEN: (See Code Sheet #6)	/ / (63-64)	/ / (65-66)	/ / (67-68)	/ / (69-70)	/ / (71-72)	/ / (73-74)	/ / (75-76)	/ / (77-78)

NOTE: Sections 6 - 9, which are the same as section 5, are not shown.

DO NOT COMPLETE
/ 1 / 5 / / / / /
(1-6)

PART IV - Post-Mortem Findings

06.Chronic,nongranulomatous
inflammation

1. POST-MORTEM EXAMINATION PERFORMED: 1.Complete autopsy (all systems, head, and cavities) 2.Complete autopsy excluding head 3.Partial autopsy 4.External examination only (i.e., in addition to on-site examination) 5.Other (specify): / / (7)

6.None (if none, please proceed to Part V)

2. PERSON FILLING OUT THIS PART (choose no more than 2): 01.Person performing PM exam 02.M.D., other 03.Medical Examiner 04.Deputy or Asst ME 05.Coroner, M.D. 06.Coroner, non-M.D. 07.Deputy/Asst Coroner, M.D. 08.Deputy or Asst Coroner, non-M.D. 09.Toxicologist 10.Policeman 11.Investigator (none of above) 12.Technician 13.Clerk/Secy 14.Other (specify): / / (8-9) / / (10-11)

3. PERSON PERFORMING PM EXAMINATION WAS: 1.M.D., Board-certified in forensic pathology 2.M.D., Board-certified or qualified in pathology 3.M.D., some formal training in pathology 4.M.D., no formal training in pathology 5.Non-M.D. 6.Unknown / / (12)

4. LOCATION OF EXAMINATION: 1.City or county morgue 2.Hospital 3.Funeral home or mortuary 4.Other (specify): / / (13)

5. APPROXIMATE TIME BETWEEN DEATH AND POST-MORTEM EXAMINATION: Hours: / / / (14-15) Days:/ / / / (16-18)

6. HISTOLOGY METHODS USED (choose no more than 2): 1.None 2.Not known 3.Hematoxylin and eosin stain (H & E) 4.Polarized light 5.Other (specify): / / (19) / / (20)

7. BACTERIOLOGY METHODS USED (choose no more than 2): 1.No bacteriology 2.Blood culture, negative 3.Blood culture, positive (specify organism): / / (21) 4.Lung culture, negative 5.Lung culture, positive (specify organism): / / (22) 6.Other culture, negative 7.Other culture, positive (specify specimen and organism):

8. POST-MORTEM CHEMICAL, HEMATOLOGIC, OR IMMUNOLOGIC STUDIES DONE? 1.Yes 2.No (If "Yes," please specify): / / (23)

9. X-RAYS TAKEN? 1.Yes 2.No 3.Unknown / / (24)

10. BODY WAS: 1.Embalmed 2.Decomposed 3.Embalmed and decomposed 4.Neither of above 5.Unknown / / (25)

11. FINDINGS: EXTERNAL (GROSS) AND SKIN (choose at least 1 and no more than 6): 01.Not studied 02.Normal 03.Froth around nose or mouth 04."Tracks" with recent hemorrhage 05."Tracks" without recent hemorrhage 06.Pigmented scars 07.Tattoos 08.Atrophic scars 09.Scars in jugular area 10.Scars on wrists or forearm 11.Subcutaneous fibrosis 12.Subcutaneous abscesses 13.Jaundice 14.Cigarette burns 15.Bruises, abrasions or contusions 16.Other burns 17.Other trauma 18.Congestion 19.Edema 20.Gynecomastia 21.Other findings related to drug use (specify): / / / (26-27) / / / (28-29) / / / (30-31) / / / (32-33) / / / (34-35) 22.Other findings not related to drug use (specify): / / / (36-37)

12. FINDINGS: HISTOLOGY (MICROSCOPIC) OF SKIN AND SUBCUTANEOUS TISSUE (choose at least 1 and no more than 3): 01.Microscopy not done 02.Normal 03.Recent hemorrhage 04.Resolving or old hemorrhage 05.Acute, nongranulomatous inflammation 07.Granulomatous inflammation, talc and/or starch 08.Granulomatous inflammation, other foreign substances 09.Nongranulomatous phlebitis 10.Granulomatous phlebitis 11.Phlebosclerosis 12.Thrombosis 13.Other findings related to drug use (specify): / / / (38-39) / / / (40-41) / / / (42-43) 14.Other findings not related to drug use (specify):

13. FINDINGS: VASCULAR SYSTEM (excluding heart but including coronary arteries; choose at least 1 and no more than 3): 01.Not studied GROSS: 02.Normal 03.Thrombosis 04.Sclerosis 05.Pulmonary emboli 06.Other emboli MICROSCOPIC: 07.Perivascular inflammation 08.Angiitis 09.Necrotizing angiitis 10.Other findings related to drug use (specify): / / / (44-45) / / / (46-47) / / / (48-49) 11.Other findings not related to drug use (specify):

14. FINDINGS: HEART (choose at least 1 and no more than 3): 01.Not studied 02.Normal 03.Right ventricular dilatation 04.Left ventricular dilatation 05.Subacute bacterial endocarditis 06.Endocarditis, other 07.Trauma 08.Cor pulmonale 09.Congestion 10.Infarct 11.Cardiomegaly (more than 450 gm for female, 500 gm for male) 12.Other findings related to drug use (specify): / / / (50-51) / / / (52-53) / / / (54-55) 13.Other findings not related to drug use (specify):

15. FINDINGS: RESPIRATORY SYSTEM (choose at least 1 and no more than 5): 01.Not studied GROSS: 02.Normal 03.Milk aspiration 04.Aspiration of gastric contents. 05.Foam filling tracheobronchial tree 06.Congestion 07.Pulmonary edema 08.Bronchopneumonia 09.Lobar pneumonia 10.Tobacco staining (green-brown mottling) 11.Lung abscess 12.Pleural effusion 13.TB 14.Trauma MICROSCOPIC: 15.Inflammation or perforation of nasal septum 16.Starch or talc deposits 17.Other findings related to drug use (specify): / / / (56-57) / / / (58-59) / / / (60-61) / / / (62-63) 18.Other findings not related to drug use (specify): / / / (64-65)

DO NOT COMPLETE
/ 1 / 6 / / / / /
(1-6)

16. FINDINGS: GASTROINTESTINAL SYSTEM (choose at least 1 and no more than 3): 01.Not studied GROSS: 02.Normal 03.Pill or other drug-related residue 04.Congestion 05.Edema 06.Hemorrhage 07.Peritonitis 08.Perforation 09.Corrosive effects 10.Trauma 11.Adhesions MICROSCOPIC: 12.Gastritis 13.Other findings related to drug use (specify): / / / (7-8) / / / (9-10) / / / (11-12) 14.Other findings not related to drug use (specify):

REPORTING FORM FOR DRUG INVOLVED DEATHS

PART IV - Post-Mortem Findings

(Continued)

17. FINDINGS: LIVER AND GALLBLADDER (choose at least 1 and no more than 3): 01.Not studied GROSS: 02.Normal 03.Hepatomegaly (more than 2,000 gm) 04.Portal fibrosis 05.Cirrhosis, Laennec's 06.Cirrhosis, postnecrotic 07.Acute viral hepatitis 08.Granuloma formation 09.Nutritional fatty liver 10.Portal lymphadenopathy 11.Congestion 12.Edema 13.Gallstones 14.Hemorrhage 15.Trauma MICROSCOPIC: 16.Chronic portal inflammation 17.Perivascular fibrosis 18.Starch or talc deposits 19.Other findings related to drug use (specify): __/__/__ (13-14) __/__/__ (15-16) __/__/__ (17-18)

20.Other findings not related to drug use (specify):

18. FINDINGS: SPLEEN (choose at least 1 and no more than 3): 01.Not studied 02.Normal 03.Splenomegaly (more than 250 gm) 04.Prominent lymphoid tissue 05.Septic softening 06.Granulomata 07.Congestion 08.Edema 09.Hemorrhage 10.Trauma 11.Absent 12.Other findings related to drug use (specify): __/__/__ (19-20) __/__/__ (21-22)

13.Other findings not related to drug use (specify): __/__/__ (23-24)

19. FINDINGS: LYMPH NODES (choose at least 1 and no more than 2): 01.Not studied GROSS: 02.Normal 03.Peripheral lymphadenopathy 04.Thymus gland enlarged 05.Thymus gland not found MICROSCOPIC: 06.Hyperplasia 07.Inflammation 08.Localized lymphadenitis 09.Other findings related to drug use (specify): __/__/__ (25-26) __/__/__ (27-28)

10.Other findings not related to drug use (specify):

20. FINDINGS: NERVOUS SYSTEM (choose at least 1 and no more than 3): 01.Not studied GROSS: 02.Normal 03.Congestion 04.Edema 05.Cerebral atrophy 06.Hemorrhage 07.Trauma MICROSCOPIC: 08.Inflammation 09.Other findings related to drug use (specify): __/__/__ (29-30) __/__/__ (31-32)

10.Other findings not related to drug use (specify): __/__/__ (33-34)

21. FINDINGS: GENITOURINARY SYSTEM (choose at least 1 and no more than 3): 01.Not studied 02.Normal 03.Pregnant 04.Reproductive organs missing 05.Congestion 06.Edema 07.Hemorrhage 08.Trauma 09.Stones 10.Adhesions 11.Other findings related to drug use (specify): __/__/__ (35-36) __/__/__ (37-38)

12.Other findings not related to drug use (specify): __/__/__ (39-40)

22. FINDINGS: ENDOCRINE SYSTEM (choose at least 1 and no more than 3): 1.Not studied 2.Normal 3.Congestion 4.Edema 5.Hemorrhage 6.Trauma 7.Other findings related to drug use (specify): __/__ (41) __/__ (42)

8.Other findings not related to drug use (specify): __/__ (43)

23. MUSCOLOSKELETAL SYSTEM (choose at least 1 and no more than 2): 1.Not studied 2.Normal 3.Congestion 4.Edema 5.Trauma 6.Other findings related to drug use (specify): __/__ (44)

7.Other findings not related to drug use (specify): __/__ (45)

24. EVIDENCE OF SYSTEMIC INFECTION: 1.Yes 2.No 3.Unknown __/__ (46)

25. EVIDENCE OF MALNUTRITION: 1.Yes 2.No 3.Unknown __/__ (47)

26. IMPRESSION OF GENERAL HEALTH OF DECEASED: 1.Good 2.Fair 3.Poor 4.Unknown __/__ (48)

REPORTING FORM FOR DRUG-INVOLVED DEATHS

DO NOT COMPLETE
/1/7/ / / / /
(1-6)

PART V - Treatment Prior to Death

1. **PERSON FILLING OUT THIS PART** (choose no more than 2): 01.M.D., not connected with Office of Coroner or ME 02.Medical Examiner 03.Deputy/Asst ME 04.Coroner, M.D. 05.Coroner, non-M.D. 06.Deputy/Asst Coroner, M.D. 07.Deputy/Asst Coroner, non-M.D. 08.Toxicologist 09.Policeman 10.Investigator (none of above) 11.Technician 12.Clerk/Secy 13.Other (specify): / / / (7-8)   / / / (9-10)

2. **HAD THE DECEASED BEEN GIVEN TREATMENT FOR THE FATAL DOSE PRIOR TO DEATH?** 1.Yes 2.No 3.Unknown (If "no" or "unknown," skip to Item #12 below.)   / / (11)

3. **DECEASED TREATED AT:** (Choose no more than 3) 1.Home 2.Dwelling of other 3.Physician's office 4.Emergency room 5.Hospital 6.Clinic 7.Ambulance or mobile emergency unit 8.Location not known 9.Other (specify):   / / (12)   / / (13)   / / (14)

4. **LENGTH OF TIME BETWEEN LAST DRUG INGESTION AND START OF TREATMENT, IN HOURS:** (Precede by zero if fewer than 2 digits; if unknown, fill spaces with 9's; if less than one hour, code as 01.)   / / / (15-16)

5. **DECEASED WAS TREATED FOR ACUTE DRUG INVOLVEMENT BY:** (Choose no more than 3) 01.Spouse or other family member 02.Friend 03.Ambulance attendant (not paramedic) 04.Paramedic 05.Nurse 06.Physician 07.Police or nonparamedic fireman 08.Self 09.Unknown 10.Other (specify):   / / (17-18)   / / (19-20)   / / (21-22)

6. **DURATION OF TREATMENT:** (Precede by zero if fewer than 2 digits; if unknown, fill spaces with 9's; if less than one hour, code "HOURS" as 01.)   DAYS (00-98) / / (23-24)   HOURS (00-23) / / (25-26)

7. **TYPES OF MANAGEMENT:** (Choose no more than 3; report medications in Items #8-11 below) 01.Vomiting 02.Gastric lavage 03.Administration of medication 04.Assisting respiration (e.g., oxygen or artificial respiration) 05.Endotracheal tube or tracheostomy 06.Dialysis 07.Cardiac massage/stimulation 08.Observation 09.Treated, but type unknown 10.Other (specify):   / / (27-28)   / / (29-30)   / / (31-32)

QUESTIONS #8-11 - MEDICATIONS USED IN TREATMENT FOR FATAL DOSE. List all medications known to have been given or taken in treatment for the fatal dose; print name of drug and code, using Code Sheet #4. Where part of the information on a medication is unknown, fill the appropriate spaces with 9's.

Dosage Level	Number of Doses Administered	How Administered
(Precede by zeros if fewer than 4 digits. Code decimal point as "x". Report amount of drug per dose, and specify units.)	(Precede by zero if fewer than 2 digits.)	1.Oral 2.I.V. 3.I.M. 4.S.C. 5.Rectal 6.Other

8. **MEDICATION**

/ / / / / (33-37)   / / / / (38-41)   / / (42-43)   / / (44)

NOTE: Questions #9-11, which are the same as #8, are not shown.

QUESTIONS #12-16 - OTHER DRUGS USED WITHIN TWO WEEKS OF DEATH. List all drugs taken within two weeks of death for medical or nonmedical purposes; include patent medicines but exclude (1) drugs listed in Part I, Item #19, as being involved in the death and (2) drugs listed in Items #8-11 above. Print name of drug and code, using Code Sheet #4. Where part of the information on a drug is unknown, fill the appropriate spaces with 9's.

Last known dosage level	Frequency of dosage in times per day	How administered	Time before death last dose was taken, in hours
(Precede by zeros if fewer than 4 digits. Code decimal point as "x". Report amount of drug per dose, and specify units.)		1.Oral 2.I.V. 3.I.M. 4.S.C. 5.Rectal 6.Other	(Precede by zeros if fewer than 3 digits.)

12. **DRUG**

/ / / / / (7-11)   / / / / (12-15)   / / (16)   / / (17)   / / / (18-20)

NOTE: Questions #13-16, which are the same as #12, are not shown.

DO NOT COMPLETE

/ 1 / 9 / / / / /
(1-6)

PART VI - Mental State of Decedent

1. PERSON(S) FILLING OUT THIS PART (choose no more than 2): 01.Medical Examiner 02.Deputy/Asst ME 03.Coroner, M.D. 04.Coroner, non-M.D. 05.Deputy/Asst Coroner, M.D. 06.Deputy/Asst Coroner, non-M.D. 07.Toxicologist 08.Policeman 09.Investigator (none of above) 10.Technician 11.Clerk/Secy 12.Other (specify): (7-8) (9-10)

2. PERSON(S) WHO WERE THE PRINCIPAL INFORMANTS CONCERNING MENTAL STATE OF DECEASED (choose no more than 2): 01.No informant 02.Spouse 03.Other member of immediate family 04.Other relative 05.Boy friend or girl friend 06.Friend or coworker 07.Business contact (including hotel manager) 08.Physician 09.Casual acquaintance or stranger 10.Unknown 11.Other (specify): (11-12) (13-14)

3. PSYCHOLOGICAL AUTOPSY (EXTENSIVE INTERVIEWS WITH RELATIVES, FRIENDS, COWORKERS OF THE DECEASED) WAS PERFORMED: 1.Yes 2.No 3.Unknown (15)

4. STRESSES THAT OCCURRED TO THE DECEASED IN THE PAST SIX MONTHS (choose no more than 3): 01.None known 02.Separation or divorce 03.Death 04.Family problems 05.Job 06.Retirement 07.Illness, injury or surgery 08.Breakup with friend 09.Legal problems 10.Criminal charges against decedent 11.Money problems 12.Change of milieu 13.Other (specify): (16-17) (18-19) (20-21)

5. DECEASED WAS DEPRESSED IN THE RECENT PAST: 1.Yes 2.No 3.Unknown (22)

6. DECEASED WAS BEING TREATED FOR MENTAL OR EMOTIONAL ILLNESS: 1.Yes 2.No 3.Unknown (23)

7. LENGTH OF THE MOST RECENT PERIOD OF MENTAL OR EMOTIONAL ILLNESS: 1.Not applicable 2.Less than 24 hours 3.1-7 days 4.1-2 weeks 5.2-4 weeks 6.More than 4 weeks 7.Unknown (24)

8. DECEASED WAS IN CONTACT IN THE THREE MONTHS PRIOR TO DEATH, FOR MENTAL OR EMOTIONAL PROBLEMS, WITH (choose no more than 2): 01.Non-psychiatric physician 02.Psychiatrist 03.Psychologist 04.Social worker 05.Minister 06.School counselor 07.Other professional counselor 08.Para-professional helper 09.Self-help group 10.No known contact 11.Other (specify): (25-26) (27-28)

9. TREATMENT MODALITY THAT WAS BEING USED FOR MENTAL/EMOTIONAL ILLNESS (choose no more than 3): 01.Not applicable 02.Antidepressant medication 03.Tranquilizer medication 04.Sedative-hypnotic 05.Stimulant medication 06.Electroshock therapy 07.Individual psychotherapy 08.Group psychotherapy 09.Hospitalization 10.Unknown 11.Other (specify): (29-30) (31-32) (33-34)

10. THIS DEATH WAS: 1.Definitely suicide 2.Probably suicide 3.Possibly suicide 4.Listed as accidental but "suspicious" 5.Listed as other than suicide (e.g., homicide, natural, etc.) but "suspicious" 6.Not suicide (35)

11. LETHALITY RATING GIVEN IN PAST THREE MONTHS: 1.Mild suicide risk 2.Moderate suicide risk 3.Severe suicide risk 4.Rating not done 5.Was or may have been done, but rating unknown 6.Unknown 7.Rated not suicidal (36)

12. SUICIDE SIGNALS THAT DECEASED PUT OUT (choose no more than 3): 1.Verbal statements about desirability or imminence of death 2.Verbal suicide threats 3.Non-verbal behavior (such as giving away possessions) 4.Correspondence 5.Creative writing 6.None 7.Unknown 8.Other (specify): (37) (38) (39)

13. SUICIDE NOTE WAS FOUND? 1.Yes 2.No 3.Unknown (40)

14. IF PREVIOUS SUICIDE ATTEMPTS, METHOD(S) USED FOR MOST OF THEM (choose no more than 2): 01.No known previous attempts 02.Oral ingestion 03.Intravenous injection 04.Subcutaneous or intramuscular injection 05.Sniffing or inhalation 06.Gunshot wound 07.Cutting 08.Hanging 09.Jumping from height 10.Jumping in front of vehicle 11.Drowning 12.Motor vehicle 13.Electric shock 14.Burning 15.Unknown 16.Previous attempts but method unknown 17.Other (specify): (41-42) (43-44)

15. PRINCIPAL PHYSICAL METHOD OF THIS SUICIDE: 01.Not applicable 02.Oral ingestion 03.I.V. 04.S.C. or I.M. injection 05.Sniffing or inhalation 06.Gunshot wound 07.Cutting 08.Hanging 09.Jumping from height 10.Jumping in front of vehicle 11.Drowning 12.Motor vehicle 13.Electric shock 14.Burning 15.Unknown 16.Other (specify): (45-46)

16. WAS HOMICIDE COMMITTED OR ATTEMPTED BY DECEASED NEAR TIME OF SUICIDE? 1.Not applicable 2.Yes 3.No 4.Unknown (47)

17. DECEASED HAD A PREVIOUS PRINCIPAL PSYCHOLOGICAL DIAGNOSIS OF (choose no more than 2): 01.None 02.Neurosis 03.Psychosis 04.Depression 05.Schizophrenia 06.Personality disorder 07.Organic brain syndrome 08.Alcoholism 09.Drug abuse 10.Sexual "deviation" 11.Unknown 12.Other (specify): (48-49) (50-51)

18. DECEASED HAD A HISTORY OF DRUG ADDICTION, DEPENDENCE, OR CHRONIC USE: 1.Yes 2.No 3.Unknown (52)

19. IF RESPONSE TO ITEM #18 ABOVE IS "YES," SPECIFY DRUGS BELOW (print generic name, if possible, and code, using Code Sheet #4):

DRUG A _____ / / / / / / (53-57)

DRUG B _____ / / / / / / (58-62)

DRUG C _____ / / / / / / (63-67)

DRUG D _____ / / / / / / (68-72)

20. ESTIMATE BELOW HOW LONG DECEASED WAS A USER OF DRUG(S) LISTED IN ITEM #19 ABOVE: 1.Not applicable 2.Less than 1 year 3.1-3 years 4.4-6 years 5.7-10 years 6.Longer than 10 years 7.Unknown

Drug A / / (73)

Drug B / / (74)

Drug C / / (75)

Drug D / / (76)

21. ESTIMATE THE MOST RECENT PERIOD OF USE OF DRUG(S) LISTED IN ITEM #19 ABOVE: 1.Not applicable 2.Within 2 weeks prior to death 3.More than 2 weeks and less than 1 year prior 4.More than 1 year prior 5.Unknown

Drug A / / (77)

Drug B / / (78)

Drug C / / (79)

Drug D / / (80)

REPORTING FORM FOR DRUG-INVOLVED DEATHS

PART VII - Additional Information

DO NOT COMPLETE

/ 2/ 0/ / / / /
(1-6)

1. PERSON(S) FILLING OUT THIS PART (choose no more than 2): 01.Medical Examiner 02.Deputy/Asst ME 03.Coroner, M.D. 04.Coroner, non-M.D. 05.Deputy/Asst Coroner, M.D. 06.Deputy/Asst Coroner, non-M.D. 07.Toxicologist 08.Policeman 09.Investigator (none of above) 10.Technician 11.Clerk/Secy 12.Other (specify): / / / (7-8) / / / (9-10)

2. PLACE OF BIRTH OF DECEASED (use Code Sheet #1; indicate county only when city is not on code sheet; when unknown or inapplicable, fill spaces with 9's): State or / / / nation (11-12)
U.S.city / / / / or county (13-15)

3. DID DECEASED POSSESS A DRIVER'S LICENSE? IF YES, IN WHAT STATE? (Use Code Sheet #1) IF NO, CODE 98; IF UNKNOWN, CODE 99: / / / (16-17)

4. HIGHEST GRADE COMPLETED IN SCHOOL BY DECEASED: (Precede by zero if fewer than 10; code 99 if unknown): (98 if not applicable) / / / (18-19)

5. MAIN OCCUPATIONAL CATEGORY OF DECEASED WHEN WORKING (see examples below *): 1.Professional 2.Semi-professional 3.Skilled 4.Semi-skilled 5.Unskilled 6.Student 7.Housewife 8.Never employed 9.Unknown / / (20)

6. WAS DECEASED EVER IN MILITARY SERVICE? 1.No 2.Unknown 3.Army 4.Navy 5.Air Force 6.Marine Corps 7.Coast Guard 8.Was in service but branch unknown 9.Other (specify): / / (21)

7. HOW MANY TATTOOS DID THE DECEASED HAVE? 1.One 2.Two 3.Three 4.Four 5.Five or more 6.At least one but exact number unknown 7.None 8.Unknown / / (22)

8. NUMBER OF TIMES DECEASED WAS MARRIED: 1.One 2.Two 3.Three 4.Four 5.Five or more 6.At least once but exact number unknown 7.Never married 8.Unknown / / (23)

9. HOW MANY TIMES WAS DECEASED KNOWN TO HAVE BEEN ARRESTED? 1.One 2.Two 3.Three 4.Four 5.Five or more 6.At least once but exact number unknown 7.Never 8.Unknown / / (24)

10. HOW MANY TIMES DID DECEASED SERVE A JAIL TERM? 1.One 2.Two 3.Three 4.Four 5.Five or more 6.At least once but exact number unknown 7.Never 8.Unknown / / (25)

11. HOW MANY TIMES WAS DECEASED CONVICTED OF A FELONY? 1.One 2.Two 3.Three 4.Four 5.Five or more 6.At least once but exact number unknown 7.Never 8.Unknown / / (26)

12. WHAT WERE THE DRINKING HABITS OF THE DECEASED? 1.Seldom or never used alcohol 2.Drank but amount unknown 3.Was considered to be a "social drinker" 4.A moderate drinker 5.A heavy drinker 6.Unknown / / (27)

13. HOW OFTEN DID THE DECEASED SMOKE (TOBACCO) CIGARETTES? 1.Never 2.Less than a pack per day 3.A pack or more per day 4.1-2 packs per day 5.Over 2 packs per day 6.Smoked but amount unknown 7.Unknown / / (28)

14. WHAT WAS THE RELIGIOUS PREFERENCE OF THE DECEASED? 1.None 2.Protestant 3.Catholic 4.Jewish 5.Buddhist 6.Mohammedan 7.Unknown 8.Other (specify): / / (29)

15. RECENT LIVING ARRANGEMENTS OF THE DECEASED: 1.With both parents 2.With mother only 3.With father only 4.With offspring 5.With other relatives 6.With spouse 7.Unmarried cohabitation 8.Alone 9.Unknown 10.Other (specify): / / (30-31)

16. HOW MANY BROTHERS DID THE DECEASED HAVE? 1.One 2.Two 3.Three 4.Four 5.Five 6.Six 7.Seven or more 8.At least one but number unknown 9.None 10.Unknown / / (32-33)

17. HOW MANY SISTERS DID THE DECEASED HAVE? 1.One 2.Two 3.Three 4.Four 5.Five 6.Six 7.Seven or more 8.At least one but number unknown 9.None 10.Unknown / / (34-35)

18. BEFORE AGE 12, WITH WHOM DID THE DECEASED LIVE MOST OF THE TIME? 1.Both mother and father 2.Mother only 3.Father only 4.Other relatives 5.Non-relatives 6.Institution 7.Unknown 8.Other (specify): / / (36)

* EXAMPLES: Professional: Accountant, architect, dentist, editor, engineer commissioned officer in military, physician (usually requires at least a B.A. degree)

Semi-Professional: Air traffic controller, draftsman, dietician, dental hygienist, interior decorator, large store manager

Skilled: Radio announcer, baker, brickman, dental assistant, electrician, carpenter

Semi-Skilled: Apprentice, bartender, clerk, hostess, nurse's aide, presser

Unskilled: Hospital attendant, gasoline station attendant, baby-sitter, bellhop, caretaker, laborer, farmhand

LIST OF CODE SHEETS

USED WITH

REPORTING FORM FOR DRUG-INVOLVED DEATHS

SURVEY 2

Code Sheet	Title	Used With Part
#1 *	U. S. States, Counties, and Cities and Areas Outside U. S. A.	I & VII
#2 **	Standard Metropolitan Statistical Areas	I
#3 **	Role of Drug Involved in Death	I
#4 ***	Drug Code (DAWN Drug Header) developed by Lea, Inc., published 6 October 1975	I, II, III, V, VI
#5	Extraction Methods Used	III
#6	Analytic Methods Used	III
#7	Drug Screening Methods	III

  * Not included. Available upon request from Department of Psychiatry and Human Behavior, College of Medicine, University of California, Irvine, CA 92717.

  ** See Survey 1 code sheets.

*** Not included. For information, write I.M.S. America Ltd., Ambler, Pennsylvania 19002.

Toxicological Methods

CODE SHEET #5 - Extraction Methods Used (additional codes added 1/30/76)

01. No extraction used
02. Distillation
03. Direct extraction by ether
04. Direct extraction by chloroform
05. Direct extraction by heptane
06. Extraction by toluene
07. Extraction by chloroform-iso-propanol
08. Exraction by n-butyl chloride
09. Ion exchange chromatography

11. Other (except 12-16 below; specify)
12. Ethyl acetate
13. Ethylene dichloride
14. Hexane
15. Hexane/isoamyl alcohol
16. N-butyl chloride/chloroform
77. Unknown

CODE SHEET #6 - Analytic Methods Used

01. Paper chromatography
02. Thin-layer chromatography
03. Gas-liquid chromatography
04. Absorption chromatography
05. Ultraviolet absorption spectro-photometry
06. Infra-red absorption spectro-photometry
07. Visible absorption spectro-photometry
08. Color test (general and specific)
09. Fluorescence spectrophotometry

10. Mass spectroscopy
11. Enzyme multiplied immunotechnique (EMIT)
12. Free radical assay technique (FRAT)
13. Radio-immunoassays (RIA)
14. Other immunoassays
15. Electron-spin resonance spectroscopy
16. Microcrystal tests
17. Atomic absorption spectroscopy
18. Other (specify)
77. Unknown

CODE SHEET #7 - Drug Screening Methods

1. Drug screen, directly on physiological fluid or tissue
2. Drug screen after acid extraction
3. Drug screen after neutral extraction
4. Drug screen after alkaline extraction
5. Drug screen, amphoterics
6. Alcohol and other volatiles

pH Code Added
777 = unknown

Appendix B: Specific Psychoactive Drugs and/or the Classes of Such Drugs Associated with 3004 Drug-Involved Deaths

In the organization and presentation of data obtained from the two surveys of 3004 psychoactive drug-involved deaths over 1972-1975, there were so many data and so many ways of looking at the data that topics of major interest to some readers could be, unfortunately, glossed over or disregarded. One of these areas of great interest was the specific psychoactive drugs and/or classes of such drugs that were associated with these deaths. To provide this broad range of information to interested readers, it was decided to collect and present in an appendix summaries of the specific drugs or their classes related to various aspects of the deaths.

NOTE: In the tables that follow, Surveys 1 and 2 are referred to as Samples 1 and 2.

B.4 Sample 2. Drugs assayed by toxicological laboratories
       (listed in Part III of the UCI reporting form)

    a. Summary by drug type
    b. Listing of specific drugs assayed by city:

        Narcotics and quinine
        Analgesics
        Barbiturates
        Sedatives and hypnotics
        Tranquilizers
        Psychostimulants; antidepressants; marijuana
          and psychedelics; alcohol
        Miscellaneous drugs

B.5 Other drugs given in treatment or taken prior to death
       (listed in Part V of UCI reporting form)   .

    a. Samples 1 and 2 compared: Summary by drug type
    b. Sample 1 by drug type
    c. Sample 2. Medications used in treatment for fatal
          dose, by drug type and city: Summary and specific
          listings
    d. Sample 2. Other drugs recently used, by drug type
          and city: Summary and specific listings

B.6 Sample 2. History of drug use (listed in Part VI of UCI
       reporting form: Question 18, Deceased had history of
       drug addiction, dependence, or chronic use, and Ques-
       tion 19, If response to #18 above is "Yes," specify
       drugs)

    a. Summary of drug type by city
    b. Listing of specific drugs by city

Table B.1. List of Psychoactive Drugs Mentioned
at Least Five Times in Each of Four Parts of the UCI Reporting Form
Sample 1 (2000 Cases 1972-1974)

KEY: These lists were compiled from responses to questions in four
different parts of the UCI reporting form for drug-involved deaths
used in Sample 1. The specific questions asked are as follows:

Involved	Part I	item 20
At the Scene	Part II	item 15
Assayed	Part III	items 12-21
Given/Taken	Part V	items 9-16

and may be seen in the Sample 1 form reproduced in Appendix A.

10/28/75 DAWN Drug Code	Drug category Used in Analysis	Part I Involved 1994 Cases	Part II At the Scene 2000 Cases	Part III Assayed 2000 Cases	Part V Given/ Taken 2000 Cases
40---	**NARCOTICS**				
40005	codeine	31	7	46	
40008 et al	meperidine, Demerol	8	12	20	7
40009	Dilaudid	6	6	6	-
40018	morphine	520	12	767	-
40166	heroin	127	61	-	-
40042	methadone	388	41	402	67
40027	Percodan (oxycodone)	-	8	-	6
40157	naloxone HCl, Narcan	-	-	-	12
CATEGORY TOTAL		1,080	147	1,241	92
41---	**ANALGESICS**				
41005 et al	aspirin, Empirin, Anacin, Excedrin, salicylate, APC	52	7	81	11
41035 et al	acetaminophen, Tylenol	-	-	-	6
41205 et al	propoxyphene, Darvon	155	58	169	14
41550, 41573	Darvocet-N, Darvon-N	-	5	-	-
41040	Darvon Compound	-	2	-	-
41263	Darvon Compound-65	5	15	-	6
41368 et al	pentazocine, Talwin	10	15	8	6
41095	phenacetin	-	-	8	-
CATBGORY T0TAL		222	102	266	43
46---	**BARBITURATES**				
46003/4	amobarbital, Amytal	121	6	123	-
46056/7	secobarbital, Seconal	239	81	246	15
46013/4	butabarbital, Butisol	12	-	15	-
46048/038	pentobarbital, Nembutal	167	78	186	16
46051	phenobarbital	150	29	157	15
46070	seco-ambarbital, Tuinal	74	60	71	15
46999	barbiturate sedative, unspecified	96	19	123	6
CATEGORY TOTAL		859	273	921	67

(Table continued)

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10/28/75 DAWN Drug Code	Drug Category Used in Analysis	Part I Involved 1994 Cases	Part II At the Scene 2000 Cases	Part III Assayed 2000 Cases	Part V Given/ Taken 2000 Cases
47---	SEDATIVES				
47013/022	chloral hydrate, Noctec	16	21	15	-
47118/015	glutethimide, Doriden	37	17	42	5
47023	methyprylon, Noludar	5	8	5	-
47028	ethchlorvynol, Placidyl	39	27	39	9
47063/057	methaqualone, Quaalude	59	23	72	7
47124/076	flurazepam, Dalmane	18	30	16	9
47111	methapyrilene, Sleep-eze	5	-	11	-
CATEGORY TOTAL		179	126	200	30
07---	TRANQUILIZERS				
07018	chlorpromazine, Thorazine	6	17	5	6
07120/061	diazepam, Valium, Serax	145	130	170	49
07023 et al	meprobamate, Miltown, Equanil, Kesso Bamate	22	24	22	5
07105/041	chlordiazepoxide, Librium	34	38	31	12
07089 et al	doxepin, Sinequan	7	12	6	-
07103	phenothiazine	42	-	46	-
07107	chlorpromazine	7	-	8	-
07121/036	thioridazine, Mellaril	23	14	20	-
07068 et al	perphenazine/amitriptyline, Triavil, Etrafon	-	14	-	5
07001 et al	prochlorperazine, Triavil, Etrafon, Compazine	-	8	-	-
CATEGORY TOTAL		286	257	308	77
12---/13---	PSYCHOSTIMULANTS				
12004 et al	amphetamine, Benzedine, Dexedrine	23	8	29	
12047	methamphetamine	43	-	26	-
12305	speed	2	-	-	-
12301	cocaine	27	-	30	-
13003 et al	phemetrazine, Preludin	29	11	28	-
CATEGORY TOTAL		124	19	113	-

10/28/75 DAWN Drug Code	Drug Category Used in Analysis	Drugs Mentioned at Least Five Times in:			
		Part I Involved 1994 Cases	Part II At the Secne 2000 Cases	Part III Assayed 2000 Cases	Part V Given/Taken 2000 Cases
11030-11999 (but includ-ing Ritalin)	ANTIDEPRESSANTS				
11103 et al	imipramine, Presamine, Tufranil	24	17	30	5
11109/054	amitsiptyline, Elavil	68	29	67	13
11073	desipramine	-	-	-	-
11016	methylphenidate HCl, Ritalin	-	9	-	-
	CATEGORY TOTAL	92	55	103	18
38001	ETHANOL				
38001	alcohol - CATEGORY TOTAL	600	2	656	7
35000-35006 and 39---	MARIJUANA AND PSYCHEDELICS				
35001	marijuana - CATEGORY TOTAL	-	21	-	-
Other codes	MISCELLANEOUS				
01026	sodium bicarbonate	-	-	-	12
15014	isoprotenerol, Isuprel	-	-	-	12
21047	tetracycline	-	6	-	
29037	carbon monoxide	7	-	8	-
30014	Empirin Compound with Codeine	-	19	-	-
32005	quinine	237	6	245	-
42025	salicylamide	-	-	74	-
45073	lidocaine	14	-	14	-
45104	trichlorethanol	-	-	5	-
48001/021	diphenylhydantoin sodium, Dilantin	14	16	-	18
48018	Dilantin Sodium + phenobarbital	10	5	26	-
51057	dexamethasone MSD, Decadron	-	-	-	9
76002 et al	adrenalin, epinephrine	-	-	-	18
95026	salicylic acid	-	-	5	-
	CATEGORY TOTAL	282	52	377	69
35999	Drug unknown CATEGORY TOTAL	19	3	-	2
Various	Unidentified drugs [a] CATEGORY TOTAL	-	15	-	52

[a] Unidentified drugs are those with some coding error that prevented identification.

Table B.2. Psychoactive Drugs Reported es Involved in the Death
(Listed in Part I, UCI Reporting Form)
Sample 2: Summary of Drug Type by City

City:		CHGO	CLVD	DALLAS	L A	MIAMI	N Y	PHIL	S F	WASH	Row N Col %
Cases:		128	69	61	144	80	240	103	104	75	1004
Narcotics	N	79	41	7	78	24	204	56	50	53	592
	Col %	41.0	30.5	6.0	27.0	19.0	59.0	22.0	26.0	36.0	33.0
Quinine [a]	N	18	2	0	0	0	2	27	0	28	77
	Col %	9.0	1.5				1.0	11.0		19.0	4.3
Analgesics	N	10	17	24	10	4	24	20	13	4	126
	Col %	5.0	13.0	19.0	3.5	3.0	7.0	8.0	7.0	3.0	7.0
Barbiturates	N	31	18	21	79	37	24	34	37	13	294
	Col %	16.0	13.0	17.0	28.0	29.0	7.0	13.5	19.0	1.0	16.4
Sedatives and hypnotics	N	5	9	12	12	18	2	23	9	2	92
	Col %	3.0	7.0	10.0	4.0	14.0	1.0	9.0	5.0	1.0	5.1
Tranquilizers	N	26	15	21	25	22	11	15	23	2	160
	Col %	14.0	11.0	17.0	9.0	17.0	3.0	6.0	12.0	14.0	8.9
Psychostimulants	N	0	0	2	0	6	4	27	10	20	69
	Col %			1.5		5.0	1.0	11.0	5.0	14.0	3.8
Antidepressants	N	0	3	5	10	4	15	3	5	5	50
	Col %		2.0	4.0	3.5	3.0	4.0	1.0	3.0	3.0	2.8
Marijuana and psychedelics	N	0	0	0	0	0	0	2	0	0	2
	Col %							1.0			0.1
Ethanol	N	20	24	14	59	11	57	38	43	20	286
	Col %	10.0	18.0	11.0	21.0	8.5	17.0	15.0	22.0	14.0	15.9
Miscellaneous	N	3	5	18	12	2	0	6	2	0	48
	Col %	2.0	4.0	14.5	4.0	1.5		2.5	1.0		2.7
TOTAL	N	192	134	124	285	128	343	251	192	147	1796
	Col %	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

[a] Quinine is here treated as an indicator of heroin.

Table B.2 continued
NARCOTICS-QUININE

Sample 2. Drugs Involved

City:	CHGO	CLVD	DALLAS	L A	MIAMI	N Y	PHIL	S F	WASH	Row Total N
Cases:	128	69	2	66	80	240	103	104	75	1004
morphine	76	24	2	66	15	1	29	0	42	255
heroin	0	3	1	1	3	74	4	0	4	90
heroin-quinine	0	0	0	0	0	5	0	0	0	5
morphine-type alkaloid	0	0	0	0	0	0	0	40	0	40
Total heroin-morphine	76	27	3	67	18	80	33	40	46	390
methadone	3	9	2	.1	5	123	18	0	7	168
codeine	0	4	1	7	0	1	3	9	0	25
hydromorphone	0	1	0	0	1	0	1	0	0	3
meperidine	0	0	1	3	0	0	1	0	0	5
hydrocodone	0	0	0	0	0	0	0	1	0	1
TOTAL NARCOTICS	79	41	7	78	24	204	56	50	53	592
TOTAL QUININE [a]	18	2	0	0	0	2	27	0	28	77

[a] In the data. quinine almost always occurred with heroin; it is therefore treated here not as a miscellaneous drug, as would be expected from its classification in the LEA code, but as en indicator of heroin.

(Table continued)

Sample 2. Drugs Involved

City:	CHGO	CLVD	DALLAS	L A	MIAMI	N Y	PHIL	S F	WASH	Row Total N
Cases:	128	69	61	144	80	240	103	104	75	1004
propoxyphene	9	8	16	8	3	24	11	12	4	95
Darvon Compound	0	1	0	0	0	0	0	0	0	1
norpropoxyphene	0	0	1	0	0	0	0	0	0	1
Darvocet-N	0	0	0	1	0	0	0	0	0	1
Total propoxyphene	9	9	17	9	3	24	11	12	4	98
salicylate	0	6	3	0	1	0	6	1	0	17
acetaminophen	0	1	0	0	0	0	2	0	0	3
phenacetin	1	0	0	0	0	0	0	0	0	1
pentazocine	0	1	3	1	0	0	1	0	0	6
Amidophen	0	0	1	0	0	0	0	0	0	1
TOTAL ANALGESICS	10	17	24	10	4	24	20	13	4	126

Sample 2. Drugs Involved

City:	CHGO	CLVD	DALLAS	L A	MIAMI	N Y	PHIL	S F	WASH	Row Total N
Cases:	128	69	61	144	80	240	103	104	75	1004
amobarbital	0	3	0	1	0	1	8	0	0	13
secobarbital	6	5	7	9	15	3	16	9	6	76
pentobarbital	7	3	3	20	11	2	2	9	4	61
phenobarbital	11	7	5	20	3	2	5	8	1	62
seco-amobarbital	6	0	6	23	7	12	0	9	2	65
barbital	0	0	0	1	0	0	0	0	0	1
butabarbital	0	0	0	2	1	1	0	2	0	6
carbrital	0	0	0	1	0	0	0	0	0	1
butalbital	0	0	0	2	0	0	1	0	0	3
barbituric acid	0	0	0	0	0	3	0	0	0	3
barbiturate sedative, unspecified	1	0	0	0	0	0	2	0	0	3
TOTAL BARBITURATES	31	18	21	79	37	24	34	37	13	294

Sample 2. Drugs Involved

City:	CHGO	CLVD	DALLAS	L A	MIAMI	N Y	PHIL	S F	WASH	Row Total N
Cases:	128	69	61	144	80	240	103	104	75	1004
glutethimide	4	0	4	2	0	0	11	2	0	23
ethchlorvynol	1	3	2	2	5	0	8	2	1	24
chloral hydrate	0	3	1	2	4	0	1	1	0	12
methapyrilene	0	1	1	0	0	0	0	0	0	2
methyprylon	0	1	0	2	2	1	1	0	0	7
flurazepam	0	1	2	3	4	1	0	2	1	14
methaqualone	0	0	1	1	2	0	1	1	0	6
ethinamate	0	0	1	0	0	0	0	0	0	1
carbromal	0	0	0	0	0	0	1	0	0	1
paraldehyde	0	0	0	0	0	0	0	1	0	1
Sominex	0	0	0	0	1	0	0	0	0	1
TOTAL SEDATIVES & HYPNOTICS	5	9	12	12	18	2	23	9	2	92

Sample 2. Drugs Involved

City:	CHGO	CLVD	DALLAS	L A	MIAMI	N Y	PHIL	S F	WASH	Row Total N
Cases:	128	69	71	144	80	240	103	104	75	1004
diazepam	18	9	14	9	10	0	2	14	1	77
chlordiazepoxide	5	1	1	4	1	0	1	2	0	15
Total benzodiazepene	23	10	15	13	11	0	3	16	1	92
chlorpromazine	0	0	0	2	4	0	3	1	1	11
thioridazine	1	1	0	0	0	0	0	2	0	4
mesoridazine	0	0	0	0	0	0	1	0	0	1
phenothiazine	2	2	0	0	0	11	1	2	0	18
Total phenothiazine	3	3	0	2	4	11	5	5	1	34
meprobamate	0	0	4	6	5	0	5	1	0	21
doxepin	0	1	2	4	1	0	2	1	0	11
buclizine HCl	0	0	0	0	1	0	0	0	0	1
hydroxyzine	0	1	0	0	0	0	0	0	0	1
TOTAL TRANQUILIZERS	26	15	21	25	22	11	15	23	2	160

Sample 2. Drugs Involved

City:	CHGO	CLVD	DALLAS	L A	MIAMI	N Y	PHIL	S F	WASH	Row Total N
Cases:	128	69	61	144	80	240	103	104	75	1004
amphetamine	0	0	1	0	1	0	14	4	0	20
methamphetamine	0	0	0	0	0	0	13	5	0	18
cocaine	0	0	0	0	5	4	0	1	0	10
phenteramine	0	0	1	0	0	0	0	0	0	1
phenmetrazine	0	0	0	0	0	0	0	0	20	20
TOTAL PSYCHOSTIMULANTS	0	0	2	0	6	4	27	10	20	69
imipramine	0	0	2	4	1	0	0	1	3	11
amitriptyline	0	3	1	6	3	15	3	3	0	34
desipramine	0	0	1	0	0	0	0	1	2	4
nortriptyline	0	0	1	0	0	0	0	0	0	1
TOTAL ANTIDEPRESSANTS	0	3	5	10	4	15	3	5	5	50
LSD	0	0	0	0	0	0	1	0	0	1
marijuana	0	0	0	0	0	0	1	0	0	1
TOTAL MARIJUANA and PSYCHEDELICS	0	0	0	0	0	0	2	0	0	2
TOTAL ETHANOL	20	24	14	59	11	57	38	43	20	286

Sample 2. Drugs Involved

City:	CHGO	CLVD	DALLAS	L A	MIAMI	N Y	PHIL	S F	WASH	Row Total N
Cases:	128	69	61	144	80	240	103	104	75	1004
Freon	1	0	2	0	0	0	0	0	0	3
diphenylhydantoin	0	2	0	0	1	0	2	1	0	6
diphenhydramine	0	1	0	2	0	0	0	0	0	3
promethazine	0	0	1	0	0	0	0	0	0	1
chlorpheniramine	0	0	2	0	0	0	0	0	0	2
procaine	0	1	0	0	0	0	0	0	0	1
trichlorethanol	0	0	0	2	0	0	0	0	0	2
lidocaine	0	0	0	0	0	0	1	0	0	1
nitrous oxide	0	0	4	0	0	0	0	0	0	4
Halothane	0	0	1	0	0	0	0	0	0	1
paint	0	0	1	0	0	0	0	0	0	1
Mysoline	0	0	0	0	1	0	0	0	0	1
propylhexidrene	0	0	3	0	0	0	0	0	0	3

Sample 2. Drugs Involved

City:	CHGO	CLVD	DALLAS	L A	MIAMI	N Y	PHIL	S F	WASH	Row Total N
Cases:	128	69	61	144	80	240	103	104	75	1004
Digoxin	0	0	1	0	0	0	0	0	0	1
salicylic acid	0	0	2	0	0	0	0	0	0	2
strychnine	0	0	1	0	0	0	0	0	0	1
Donnatal	0	0	0	1	0	0	0	0	0	1
caffeine	0	0	0	4	0	0	0	0	0	4
salicylamide	0	0	0	1	0	0	0	0	0	1
Motrin	0	0	0	1	0	0	0	0	0	1
Coumadin	0	0	0	1	0	0	0	0	0	1
Ritalin	0	0	0	0	0	0	1	0	0	1
carbon monoxide	1	0	0	0	0	0	0	1	0	2
thiopental sodium	1	0	0	0	0	0	0	0	0	1
"drug unknown"	0	1	0	0	0	0	2	0	0	3
TOTAL MISCELLANEOUS	3	5	18	12	2	0	6	2	0	48

Table B.3a. Psychoactive Drugs Found et the Scene of Death
(Listed in Part II, UCI Reporting Form)

Samples I and 2 Compared: Summary by Drug Type

Drug		Sample I 2000 cases	Sample 2 1004 cases
Narcotics	N Col. %	149 11.6	68 11.1
Analgesics	N Col. %	120 9.1	63 10.3
Barbiturates	N Col. %	283 21.6	108 17.6
Sedatives	N Col. %	136 10.3	70 11.4
Tranquilizers	N Col. %	275 20.9	160 26.1
Psychostimulants	N Col. %	26 2.0	6 1.0
Antidepressants	N Col. %	57 4.3	31 5.1
Marijuana and psychedelics	N Col. %	22 1.7	6 1.0
Ethanol	N Col. %	42 3.2	17 2.8
Miscellaneous	N Col. %	187 14.2	84 13.6
Unidentified	N Col. %	15 1.1	[a]
Total	N Col. %	1312 100.0	613 100.0

[a] "UnIdentified drugs" are those in Sample 1 with some coding error that prevented identificetion. No such errors occurred in Sample 2.

Table B.3b. Psychoactive Drugs Found at the Scene of Death
(Listed in Part II, UCI Reporting Form)
Sample 1: Summary of Drug Type by City

City:		CHGO	CLVD	DALLAS	L A	MIAMI	N Y	PHIL	S F	WASH	Row N Col %
Cases:		128	69	61	144	80	240	103	104	75	1004
Narcotics	N	4	3	7	21	18	37	20	28	11	149
	Col %	7.5	5.4	6.7	6.9	6.7	20.1	38.4	12.6	15.7	11.4
Analgesics	N	2	8	18	25	30	15	3	10	9	120
	Col %	3.8	14.3	17.3	8.3	11.2	8.2	5.8	4.5	12.9	9.1
Barbiturates	N	22	12	12	70	55	14	7	78	13	283
	Col %	41.5	21.4	11.5	23.1	20.5	7.6	13.5	35.0	18.6	21.6
Sedatives	N	3	7	6	30	49	5	1	28	7	136
	Col %	5.7	12.5	5.8	9.9	18.3	2.7	1.9	12.6	10.0	10.4
Tranquilizers	N	9	13	27	70	56	35	9	44	12	275
	Col %	16.9	23.2	26.0	23.1	20.9	19.0	17.3	19.7	17.1	20.9
Psychostimulants	N	0	2	9	4	7	1	0	0	3	26
	Col %	.0	3.6	8.7	1.3	2.6	.5	.0	.0	4.3	2.0
Antidepressants	N	1	5	7	11	11	7	4	6	5	57
	Col %	1.9	8.9	6.7	3.6	4.1	3.8	7.7	2.7	7.1	4.3
Marijuana and psychedelics	N	0	0	3	3	3	6	4	0	3	22
	Col %	.0	.0	2.9	1.0	1.2	3.3	7.7	.0	4.3	1.7
Ethanol	N	3	2	1	1	14	6	0	11	4	42
	Col %	5.7	3.6	1.0	.3	5.2	3.3	.0	4.9	5.7	3.2
Miscellaneous	N	6	4	14	63	21	55	4	17	1	185
	Col %	11.3	7.1	13.4	20.8	7.8	29.9	7.7	7.6	1.4	14.1
Unidentified [a]	N	1	0	0	5	4	2	0	1	2	15
	Col %	1.9	.0	.0	1.7	1.5	1.1	.0	.4	2.9	1.1
Unknown drug [b]	N	2	0	0	0	0	1	0	0	0	3
	Col %	3.8	.0	.0	.0	.0	.5	.0	.0	.0	.2
TOTAL	N	53	56	104	303	268	184	52	223	70	1313
	Col %	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

[a] Unidentified drugs are those with some coding error that prevented identification.

[b] Unknown drugs correspond to the LEA code for an unknown drug.

Table B.3c. Psychoactive Drugs Found at the Scene of Death
(Listed in Part II, UCI Reporting Form)
Sample 2: Summary of Drug Type by City

City:		CHGO	CLVD	DALLAS	L A	MIAMI	N Y	PHIL	S F	WASH	Row N Col %
Cases:		128	69	61	144	80	240	103	104	75	1004
Narcotics	N	0	7	3	6	11	11	14	4	12	68
	Col %		18.9	7.3	4.7	9.4	19.3	17.3	3.9	34.3	11.1
Analgesics	N	2	5	6	10	9	7	7	11	3	60
	Col %	15.3	13.5	14.6	7.8	7.7	12.3	8.7	10.6	8.6	9.8
Barbiturates	N	1	4	4	29	25	9	10	21	5	108
	Col %	7.7	10.8	9.8	22.5	21.4	15.8	12.3	20.4	14.3	17.6
Sedatives	N	0	3	5	13	19	4	10	14	2	70
	Col %		8.2	12.2	10.1	16.2	7.0	12.3	13.6	5.7	11.4
Tranquilizers	N	4	11	16	28	33	12	24	25	7	160
	Col %	30.8	29.7	39.0	21.7	28.2	21.1	29.6	24.3	20.0	26.1
Psychostimulants	N	0	0	2	2	0	1	0	1	0	6
	Col %			4.9	1.6		1.8		1.0		1.0
Antidepressants	N	0	0	2	7	8	7	2	4	2	32
	Col %			4.9	5.3	6.8	12.3	2.5	3.9	5.7	5.2
Marijuana and psychedelics	N	0	0	0	1	0	3	2	0	0	6
	Col %				0.8		5.2	2.5			1.0
Ethanol	N	1	0	0	7	0	0	0	7	2	17
	Col %	7.7			5.3				6.8	5.7	2.8
Miscellaneous	N	5	7	3	26	12	3	12	16	2	86
	Col %	38.5	18.9	7.3	20.2	10.3	5.2	14.8	15.5	5.7	14.0
TOTAL	N	13	37	41	129	117	57	81	103	35	613
	Col %	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	Row %	2.1	6.0	6.8	21.0	19.1	9.3	13.2	16.8	5.7	100.0

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Table B.3d. Psychoactive Drugs Found at the Scene of Death
(Listed in Part II, UCI Reporting Form)
Sample 2: Listings of Specific Drugs by City   CHICAGE
CLEVELAND
DALLAS

CHICAGO - 13 listings (128 cases)

Analgesics	2 total
D-propoxyphene (Darvon)	2

Barbiturates	1 total
seco-amobarbital (Tuinal)	1

Tranquilizers	4 total
diazepam (Valium)	4
fluphenazine (Prolixin)	1

Miscellaneous	3 total
diphenylhydantoin (Dilantin)	2
Lomotil	1

"Drug unknown"	2 total

Ethanol	1 total

CLEVELAND - 37 listings (69 cases)

Narcotics	7 total
heroin	2
heroin and quinine	2
morphine	2
oxycodone (Percodan)	1

Analgesics	5 total
D-propoxyphene (Darvon)	2
pentazocine	1
salicylates (Empirin Compound, Equagesic)	2

Barbiturates	4 total
pentobarbital (Nembutal)	1
secobarbital (Seconal)	3

Sedatives	3 total
chloral hydrate	1
ethchlorvynol	1
flurazepam	1

Tranquilizers	11 total
chlordiazepoxide (Librium)	2
diazepam (Valium)	4
doxepin (Sinequan)	1
perphenazine/amitriptyline (Etrafon)	2
thioridazine (Mellaril)	1
trifluoperazine (Stelazine)	1

Miscellaneous	7 total
Aldomet	1
Digoxin	1
Donnatal (belladonna + phenobarbital)	2
Hycodan	
propanolo (Inderal)	1
Lomotil	1

(Table continued)

DALLAS - 41 listings (61 cases)

Narcotics	3 total
codeine	1
meperidine (Demerol)	1
morphine	1

Analgesics	6 total
acetaminophen (Tylenol)	1
D-propoxyphene (Darvon and Darvocet-N)	4
Phenaphen	1

Barbiturates	4 total
phenobarbital.	1
"pink ladies"	1
secobarbital	1
seco-amobarbital	1

Sedatives	5 total
chloral hydrate	1
ethchlorvynol (Placidyl)	1
flurazepam (Dalmane)	2
glutethimide (Doriden)	1

Tranquilizers	16 total
chlorpromazine (Thorazine)	1
diazepam (Valium)	8
doxepin (Sinequan)	2
oxazepam (Serax)	1
perphenazine/amitriptyline (Triavil)	1
chloridazine (Mellaril)	3

Psychostimulants	2 total
D-amphetamine/amobarbital (Dexamyl)	1
masindole (Sanorex)	1

Antidepressants	2 total
D-amphetamine/amobarbital (Dexamyl)	1
imipramine (Tofranil)	1

Miscellaneous	3 total
Actifed	1
Librax (Librium + anti-spasmodic)	1
cyclizine HCl	1

(Table continued)

Drugs Found at the Scene

LOS ANGELES - 129 listings (144 cases)	
Narcotics	**6 total**
codeine	1
meperidine	1
morphine	2
oxycodone HCl (Percodan)	2
Analgesics	**10 total**
acetaminophen (Tylenol)	2
Amidophen	1
D-propoxyphene (Darvon, Darvocet-N and N-100)	5
pentazocine (Talwin)	1
Phenaphen	1
salicylates with codeine (APC or Empirin Compound)	3
Barbiturates	**29 total**
butalbital (Lotusate)	1
pentobarbital (Nembutal)	10
phenobarbital	4
secobarbital	4
seco-amobarbital (Tuinal)	10
Sedatives	**13 total**
chloral hydrate	3
flurazepam (Dalmane)	8
methapyrilene HCl (Nytol)	1
methyprylon (Noludar)	1
Tranquilizers	**28 total**
chlordiazepoxide (Librium)	3
diazepam (Valium)	18
doxepin (Sinequan)	3
meprobamate (Miltown)	3
perphenazine (Trilafon)	1
Psychostimulants	**2 total**
amphetamine (Obetrol)	1
D-amphetamine (Dexedrine)	1
Antidepressants	**7 total**
amitriptyline (Elavil)	3
caffeine	1
imipramine (Tofranil)	3
Marijuana and psychedelics	**1 total**
marijuana	1
"Drug unknown"	**3 total**
Miscellaneous	**23 total**
aminophylline	1
antibiotics (Terramycin, Tetracycline)	2
trihexyphenidyl HCl (Artane)	1
acetaminophen + pheniramine + pseudo-ephedrine (Co-Tylenol)	1
Coumadin	1
belladonna + phenobarbital (Donnatal)	3
Flagyl	1
Gelusil	1
Hydrodiuril	1
Indocin	2
Librax (Librium + anti-spasmodic)	2
Motrin	1
Mylanta	1
primidone (Mysoline)	1
procaine	1
Alcohol	**7 total**

MIAMI - 117 listings (80 cases)	
Narcotics	**11 total**
codeine	1
heroin	4
meperidine	2
methadone	1
morphine	1
oxycodone HCl (Percodan)	2
Analgesics	**11 total**
D-propoxyphene (Darvon, Darvocet-N-100)	8
promethazine HCl (Synaglos)	1
acetominophen with codeine (Ban Caps C, Tylenol)	2
Barbiturates	**25 total**
butabarbital	1
pentobarbital (Nembutal)	7
phenobarbital	1
secobarbital (Seconal)	9
seco-amobarbital (Tuinal)	7
Sedatives	**19 total**
chloral hydrate (Noctec)	3
ethchlorvynol (Placidyl)	2
flurazepam (Dalmane)	8
methaqualone	1
methyprylon (Noludar)	3
nitrazepam (Mogadon)	1
salicylamide/methapyrilene (Sominex)	1
Tranquilizers	**33 total**
buclizine HCl (Softran)	1
chlordiazepoxide (Librium)	6
chlorpromazine (Thorazine)	4
diazepam (Valium)	13
doxepin (Sinequan)	1
meprobamate (Miltown)	5
perphenazine/amitriptyline (Triavil)	1
thioridazine (Mellaril)	1
trifluoperazine (Stelazine)	1
Antidepressants	**8 total**
amitriptyline (Elavil)	4
imipramine (Tofranil, Presamine)	4
Miscellaneous	**10 total**
Cogentin	1
Dilantin	4
Dramimine	1
Librax	1
Lomotil	1
Macrodantin	1
Mysoline	1

(Table continued)

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Drugs Found at the Scene

NEW YORK - 57 listings (240 cases)	
Narcotics	**11 total**
heroin	2
methadone	4
morphine	3
Percodan	2
Analgesics	**7 total**
D-propoxyphene (Darvon)	7
Barbiturates	**9 total**
amobarbital	1
phenobarbital	1
secobarbital (Seconal)	4
seco-amobarbital (Tuinal)	3
Sedatives	**4 total**
chloral hydrate	1
flurazepam	1
glutethimide (Doriden)	1
methyprylon (Noludar)	1
Tranquilizers	**12 total**
chlorpromazine (Thorazine)	1
diazepam (Valium)	6
meprobamate	1
thioridazine (Mellaril)	2
trifluoperazine (Stelazine)	2
Psychostimulants	**1 total**
D-amphetamine (Dexedrine)	1
Antidepressants	**7 total**
amitriptyline	5
imipramine (Tofranil)	2
Marijuana and psychedelics	**3 total**
marijuana	3
Miscellaneous	**3 total**
trihexyphenidyl HCl (Artane)	3

PHILADELPHIA - 81 listings (103 cases)	
Narcotics	**11 total**
codeine sulfate	1
heroin	9
methadone	3
oxycodone (Percodan)	1
Analgesics	**7**
Amidophen	1
D-propoxyphene (Darvon 65, Darvocet-N and N-100)	5
pentazocine (Talwin)	1
Barbiturates	**10 total**
pentobarbital	1
pentobarbital + carbimal (Carbrital)	1
phenobarbital	1
secobarbital	2
seco-amobarbital (Tuinal)	5
Sedatives	**10 total**
ethchlorvynol	4
flurazepam	3
glutethimide	2
triclofos sodium (Triclos)	1
Tranquilizers	**24 total**
chlordiazepoxide	3
chlorpromazine (Librium)	1
diazepam (Valium)	11
doxepin (Adapin and Sinequan)	3
meprobamate	1
thioridazine (Mellaril)	4
trifluoperazine (Stelazine)	1
Antidepressants	**2 total**
amitriptyline (Elavil)	2
Marijuana and psychedelics	**2 total**
marijuana	2
"Drug unknown"	**9 total**
Miscellaneous	**3 total**
diphenylhydantoin sodium (Dilantin)	1
lithium carbonate	1
procaine	1

(Table continued)

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SAN FRANCISCO - 103 listings (104 cases)

Narcotics	4 total
codeine	2
levorphanol tartrate (Levo-Dromoran)	1
meperidine (Demerol)	1

Analgesics	12 total
D-propoxyphene (Darvon-N, Darvocet-N, with salicylates)	9
pentazocine (Talwin)	1
salicylate compound (Empirin compound)	1
salicylates + codeine (APC with codeine)	1

Barbiturates	21 total
pentobarbital (Nembutal)	5
phenobarbital	5
secobarbital (Seconal)	6
seco-amobarbital (Tuinal)	5

Sedatives	14 total
chloral hydrate	1
ethchlorvynol	2
flurazepam	8
glutethimide	1
methaqualone	1
methyprylon	1

Tranquilizers	25 total
chlorazepate (Tranxene)	1
chlordiazepoxide	4
diazepam	16
doxepin	1
meprobamate	1
perphenazine/amitriptyline (Etrafon)	1
thioridazine	1

Psychostimulants	1 total
amphetamine + D-amphetamine (Biphetamine)	1

Antidepressants	4 total
amitriptyline	1
imipramine (Tofranil)	3

Ethanol	7 total

Miscellaneous	15 total
aminophyllin (Amesec)	2
chlorpheniramine (Teldrin)	2
diphenylhydantoin (Dilantin)	2
Dyazide	1
ephedrine + amobarbital	1
phenobarbital + belladonna	1
Prednisone	1
propanolol HCl	1
pseudoephredine	1
carisoprodol + phenacetin (Soma)	1
sodium levothyroxin (Synthroid)	2

WASHINGTON, D.C. - 35 listings (75 cases)

Narcotics	12 total
heroin	8
morphine	4

Analgesics	3 total
D-propoxyphene (Darvon)	3

Barbiturates	5 total
pentobarbital (Nembutal)	1
secobarbital	3
seco-amobarbital (Tuinal)	1

Sedatives	2 total
ethchlorvynol (Placidyl)	1
flurazepam (Dalmane)	1

Tranquilizers	7 total
chlordiazepoxide (Librium)	4
diazepam (Valium)	3

Antidepressants	2 total
imipramine (Tofranil)	2

Ethanol	2 total

"Drug unknown"	1 total

Miscellaneous	1 total
methscopolamine bromide (Pamine)	1

Table B.4. Drugs Assayed by Toxicological Laboratories
(Listed in Pert III, UCI Reporting Form)
Sample 2: Summary of Drug Type by City

City:		CHGO	CLVD	DALLAS	L A	MIAMI	N Y	PHIL	S F	WASH	Row N Col %
Cases:		128	69	61	144	80	240	103	104	75	1004
Narcotics	N	79	42	18	113	26	194	48	50	50	620
	Col %	33.9	28.0	9.3	26.3	18.8	51.3	21.4	25.0	34.5	29.6
Quinine [a]	N	18	4	0	0	0	47	27	0	27	123
	Col %	7.7	2.7				12.4	12.1		18.6	5.9
Analgesics	N	11	20	31	12	4	24	19	13	4	138
	Col %	4.7	13.3	16.0	2.8	2.9	6.3	8.5	6.5	2.8	6.6
Barbiturates	N	31	18	28	83	38	24	30	45	13	310
	Col %	13.3	12.0	14.4	19.3	27.5	6.3	13.4	22.5	9.0	14.8
Sedatives and hypnotics	N	5	9	12	22	19	2	21	9	2	101
	Col %	2.1	6.0	6.2	5.1	13.8	.5	9.4	4.5	1.4	4.8
Tranquilizers	N	26	15	30	48	24	11	12	23	2	191
	Col %	11.2	10.0	15.5	11.2	17.4	2.9	5.4	11.5	1.4	9.1
Psychostimulants	N	0	0	2	4	7	4	27	10	20	74
	Col %			1.0	.9	5.1	1.1	12.1	5.0	13.8	3.5
Antidepressants	N	0	3	7	10	5	15	3	5	6	54
	Col %		2.0	3.6	2.3	3.6	4.0	1.3	2.5	4.1	2.6
Marijuana and psychedelics	N	0	0	0	0	0	0	1	0	0	1
	Col %							.4			.4
Ethanol	N	60	28	39	118	14	56	34	43	21	413
	Col %	25.8	18.7	20.1	27.4	10.1	14.8	15.2	21.5	14.5	19.7
Miscellaneous	N	3	11	27	20	1	1	2	2	0	67
	Col %	1.2	7.3	13.9	4.7	.7	.3	.9	1.0		3.2
TOTAL ASSAYS [b]	N	233	150	194	430	138	378	224	200	145	2092
	Col %	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	Row %	11.1	7.2	9.3	20.6	6.6	18.1	10.7	9.6	6.9	100.0

[a] In the data, quinine almost always occurred with heroin; it is therefore treated here not as a miscellaneous drug. as would be expected from its classification in the LEA code. but es an indicator of heroin.

[b] Including negative, trace, qualitative, and quantitative findings. For detailed analysis of assays, see Chapter 9.

Sample 2. Drugs Assayed

City:	CHGO	CLVD	DALLAS	L A	MIAMI	N Y	PHIL	S F	WASH	Row Total N
Cases:	128	69	61	144	80	240	103	104	75	1004
morphine	76	27	6	77	17	62	27	0	42	334
heroin	0	0	0	0	3	7	0	0	1	11
morphine-type alkaloid	0	0	1	0	0	0	0	40	0	41
Total heroin-morphine	76	27	7	77	20	69	27	40	43	386
narcotics, unspecified	0	0	5	0	0	0	0	0	0	5
methadone	3	10	2	2	5	124	16	0	7	169
codeine	0	4	1	31	0	1	3	9	0	49
hydromorphone	0	1	0	0	1	0	1	0	0	3
meperidine	0	0	3	3	0	0	1	0	0	7
hydrocodone	0	0	0	0	0	0	0	1	0	1
TOTAL NARCOTICS [a]	79	42	18	113	26	194	48	50	50	620
TOTAL QUININE [a, b]	18	4	0	0	0	47	27	0	27	123

[a] Including negative, trace, qualitative, and quantitative findings. For further detail, see Chapter 9.

[b] Quinine is here treated as an indicator of heroin.

(Table continued)

Table 8.4 continued
ANALGESICS

Sample 2. Drugs Assayed

City:	CHGO	CLVD	DALLAS	L A	MIAMI	N Y	PHIL	S F	WASH	Row Total N
Cases:	128	69	61	144	80	240	103	104	75	1004
propoxyphene	9	9	18	9	3	24	11	12	4	99
norpropoxyphene	0	0	9	0	0	0	0	0	0	9
propoxyphene amide	0	0	0	1	0	0	0	0	0	1
Total propoxyphene	9	9	27	10	3	24	11	12	4	109
salicylate	0	9	0	0	1	0	5	1	0	16
acetaminophen	0	1	0	0	0	0	2	0	0	3
phenacetin	2	0	0	0	0	0	0	0	0	2
pentazocine	0	1	4	2	0	0	1	0	0	8
TOTAL ANALGESICS [a]	11	20	31	12	4	24	19	13	4	138

[a] Including negative, trace, qualitative, and quantitative findings. For further detail, see Chapter 9.

Sample 2. Drugs Assayed

City:	CHGO	CLVD	DALLAS	L A	MIAMI	N Y	PHIL	S F	WASH	Row Total N
Cases:	128	69	61	144	80	240	103	104	75	1004
amobarbital	0	3	0	4	0	1	8	8	0	24
secobarbital	6	5	7	9	16	3	15	17	6	84
pentobarbital	7	5	3	23	11	2	2	9	5	67
phenobarbital	11	5	9	23	3	2	4	8	0	65
seco-amobarbital	6	0	6	19	5	12	0	1	2	51
barbital	0	0	0	1	0	0	0	0	0	1
butabarbital	0	0	0	2	1	0	0	2	0	5
butalbital	0	0	0	2	0	1	1	0	0	4
barbituric acid	0	0	0	0	0	3	0	0	0	3
barbiturate sedative, unspecified	1	0	3	0	2	0	0	0	0	6
TOTAL BARBITURATES [a]	31	18	28	83	38	24	30	45	13	310

[a] Including negative, trace, qualitetive, and quantitative findings. For further detail, see Chapter 9.

Sample 2. Drugs Assayed

City:	CHGO	CLVD	DALLAS	L A	MIAMI	N Y	PHIL	S F	WASH	Row Total N
Cases:	128	69	61	144	80	240	103	104	75	1004
glutethimide	4	0	4	3	0	0	10	2	0	23
ethchlorvynol	0	3	3	7	5	0	8	2	0	28
chloral hydrate	0	3	0	0	4	0	0	1	0	8
methapyrilene	0	1	1	0	1	0	0	0	0	3
flurazepam	1	1	2	7	4	1	0	2	1	19
methaqualone	0	0	2	1	2	0	1	1	1	8
methyprylon	0	1	0	3	3	1	1	0	0	9
ethinamate	0	0	0	1	0	0	0	0	0	1
carbromal	0	0	0	0	0	0	1	0	0	1
paraldehyde	0	0	0	0	0	0	0	1	0	1
TOTAL SEDATIVES AND HYPNOTICS [a]	5	9	12	22	19	2	21	9	2	101

[a] Including negative, trace, qualitative, and quantitative findings. For further detail, see Chapter 9.

Sample 2. Drugs Assayed

City:	CHGO	CLVD	DALLAS	L A	MIAMI	N Y	PHIL	S F	WASH	Row Total N
Cases:	128	69	61	144	80	240	103	104	75	1004
diazepam	18	9	18	21	12	0	2	14	1	95
chlordazepoxide	5	1	2	3	1	0	0	2	0	14
dimethyldiazepam	0	0	3	0	0	0	0	0	0	3
Total benzodiazepines	23	10	23	24	13	0	2	16	1	112
chlorpromazine	0	0	0	2	4	0	3	1	1	11
thioridazine	1	1	0	0	0	0	0	2	0	4
phenothiazine	2	2	0	11	0	11	2	2	0	30
Total phenothiazine	3	3	0	13	4	11	5	5	1	45
meprobamate	0	0	4	6	5	0	4	1	0	20
doxepin	0	1	2	5	1	0	1	1	0	11
buclizine HCl (Softran)	0	0	0	0	1	0	0	0	0	1
hydroxyzine	0	1	0	0	0	0	0	0	0	1
benactyzine	0	0	1	0	0	0	0	0	0	1
TOTAL TRANQUILIZERS [a]	26	15	30	48	24	11	12	23	2	191

[a] Including negative, trace, qualitative, and quantitative findings. For further detail, see Chapter 9.

Sample 2. Drugs Asseysd   PSYCHOSTIMULANTS; ANTIDEPRESSANTS; MARIJUANA AND PSYCHEDELICS; ETHANOL

City:	CHGO	CLVD	DALLAS	L A	MIAMI	N Y	PHIL	S F	WASH	Row Total N
Cases:	128	69	61	144	80	240	103	104	75	1004
amphetamine	0	0	1	1	1	0	14	4	0	21
methamphetamine	0	0	0	0	0	0	13	5	0	18
cocaine	0	0	0	3	6	4	0	1	0	14
phentermine	0	0	1	0	0	0	0	0	0	1
phenmetrazine	0	0	0	0	0	0	0	0	20	20
TOTAL PSYCHOSTIMULANTS[a]	0	0	2	4	7	4	27	10	20	74
imipramine	0	0	2	4	2	0	0	1	3	12
amitriptyline	0	3	3	6	3	15	3	3	0	36
desipramine	0	0	1	0	0	0	0	1	3	5
nortriptyline	0	0	1	0	0	0	0	0	0	1
TOTAL ANTIDEPRESSANTS[a]	0	3	7	10	5	15	3	5	6	54
LSD	0	0	0	0	0	0	1	0	0	1
TOTAL MARIJUANA and PSYCHEDELICS [a]	0	0	0	0	0	0	1	0	0	1
TOTAL ETHANOL	60	28	39	118	14	56	34	43	21	413

[a] Including negative, trace, qualitative, and quantitative findings. For further detail, see Chapter 9.

Sample 2. Drugs Assayed   MISCELLANEOUS

City:	CHGO	CLVD	DALLAS	L A	MIAMI	N Y	PHIL	S F	WASH	Row Total N
Cases:	128	69	61	144	80	240	103	104	75	1004
Freon	1	0	2	0	0	0	0	0	0	3
diphenylhydantoin	0	2	2	0	1	0	1	1	0	7
diphenhydramine	0	3	0	2	0	0	0	0	0	5
promethazine	0	0	1	0	0	0	0	0	0	1
chlorpheniramine	0	0	2	0	0	0	0	0	0	2
procaine	0	1	0	0	0	0	0	0	0	1
lidocaine	0	0	0	1	0	1	1	0	0	3
trichlorethanol	0	0	1	10	0	0	0	0	0	11
nitrous oxide	0	0	3	0	0	0	0	0	0	3
Halothane	0	0	1	0	0	0	0	0	0	1
volatile substance	0	0	2	0	0	0	0	0	0	2
salicylamide	0	1	0	2	0	0	0	0	0	3
Pentothal	1	0	0	0	0	0	0	0	0	1
caffeine	0	2	1	0	0	0	0	0	0	3
Digoxin	0	1	2	0	0	0	0	0	0	3
propanolol	0	1	0	0	0	0	0	0	0	1
propylhexidrene	0	0	3	0	0	0	0	0	0	3
salicylic acid	0	0	5	0	0	0	0	0	0	5
strychnine	0	0	1	0	0	0	0	0	0	1

(Table continued)

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Sample 2. Drugs Assayed

City:	CHGO	CLVD	DALLAS	L A	MIAMI	N Y	PHIL	S F	WASH	Row Total N
Cases:	128	69	61	144	80	240	103	104	75	1004
quinidine	0	0	1	0	0	0	0	0	0	1
theophylline	0	0	0	3	0	0	0	0	0	3
carisoprodol	0	0	0	2	0	0	0	0	0	2
carbon monoxide	1	0	0	0	0	0	0	1	0	2
TOTAL ASSAY OF MISCELLANEOUS DRUGS [a]	3	11	27	20	1	1	2	2	0	67

[a] Including negative, trace. qualitative, and quantitative findings. For further detail, see Chapter 9.

Table B.5a Drugs Given in Treatment or Taken Prior to Death
(Listed in Part V, UCI Reporting Form)
Sample 1 and 2 Compared: Summary by Drug Type

	Narc	Anal	Barb	Sed	Tranq	Psycho-stim	Anti-dep	Mari & Psych	Ethanol	Misc	Un-ident	Total N
Sample 1. 2000 cases												
"Medications known to have been given or taken within 2 weeks of death (including treatment)"												
TOTAL LISTINGS N	101	47	69	37	101	5	22	1	7	178	52	620
Row %	16.3	7.6	11.1	6.0	16.3	0.8	3.6	0.1	1.1	28.7	8.4	100.0
Sample 2, 1004 cases												
(a) "Medications used in treatment for the fatal dose"												
Listings N	28	3	4	0	2	0	0	0	0	105	[a]	142
Row %	19.7	2.1	2.8		1.4					74.0		100.0
(b) Other drugs (except those involved) "used within 2 weeks of death"												
Listings N	15	21	5	20	59	4	11	2	0	123	[a]	260
Row %	5.8	8.1	1.9	7.7	22.7	1.5	4.2	0.8		47.3		100.0
SAMPLE 2 TOTAL LISTINGS N	43	24	9	20	61	4	11	2	0	228	[a]	402
Row %	10.7	6.0	2.2	5.0	15.2	1.0	2.7	0.5		56.7		100.0

[a] "Unidentified" drugs are those with some coding error that prevented identification in Sample 1.

Other Drugs Given in Treatment or Taken
Within Two Weeks of Death, by Drug Type
(Listed in Part V, UCI Reporting Form)

Sample 1

Drug Name	Number of Listings	Drug Name	Number of Listings
NARCOTICS		SEDATIVES	
methadone	67	Placidyl	9
Narcan	12	Dalmane	8
Demerol	7	Doriden	5
Percodan	6	Quaalude	4
heroin	3	chloral hydrate	3
morphine	3	methaqualone	3
Dilaudid	2	sleeping pill, unspeci-	
Nalline	1	fied	2
	Total 101	flurazepan	1
		paraldehyde	1
ANALGESICS		Sleep-Eze	1
Darvon	14		Total 37
Darvon Compound-65	6		
Talwin	6	TRANQUILIZERS	
Tylenol	5	Valium	49
aspirin	5	Librium	12
salicylate	4	Compazine	9
Anacin	1	Thorazine	6
acetaminophen	1	Triavil	5
Darvocet-N	1	meprobamate	4
Darvon-N	1	Sinequan	4
Empirin Compound	1	phenothiazine	2
Excedrin	1	Stelazine	2
Ponstel	1	tranquilizer, unspeci-	
propoxyphene	1	fied	2
	Total 47	Mellaril	1
		Miltown	1
BARBITURATES		Navane	1
phenobarbital	15	Quide	1
Tuinal	15	Tranxene	1
Nembutal	13	Trilafon	1
Seconal	8		Total 101
secobarbital	7		
barbiturate sedative	6	PSYCHOSTIMULANTS	
pentobarbital	3	cocaine	3
barbiturate "Reds"	3	amphetamine	3
Carbrital	1	diet pill, unspecified	1
	Total 69		Total 5

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Sample 1. Other Drugs Given or Taken   Table B.5b continued

Drug Name	Number of Listings
ANTIDEPRESSANTS	
Elavil	12
Tofranil	4
amitriptyline	1
Aventyl HCl	1
imipramine	1
Norpramin	1
Ritalin	1
Vivactil	1
	Total 22

MARIJUANA AND PSYCHEDELICS	
marijuana	1
	Total 1

ETHANOL	
alcohol	7
	Total 7

MISCELLANEOUS	
Dilantin	18
Isuprel	12
sodium bicarbonate	12
Epinephrine	10
Decadron	9
adrenaline	8
penicillin G	7
atropine sulfate	6
Aramine injection	5
Empirin Comp. with Codeine	4
Keflin	4
Lasix	4
Mysoline	4
calcium gluconate	3
Mannitol	3
Tetracycline	3
antacids unspecified	2
antibiotics, unspecified	2
Colace	2
Dextran	2
"drug unknown"	2
Heparin Sodium	2
Insulin	2
Keflex	2
Maalox	2
Steroid	2
Tedral	2
Xylocaine	2
Aldomet	1
Amesec	1
Amphojel	1
Antabuse	1
APC with codeine	1

Drug Name	Number of Listings
MISCELLANEOUS (continued)	
Apresoline	1
Bancaps-C	1
Bentyl	1
Bonine	1
Cogentin	1
Colbenemid	1
Contac	1
Cytomel	1
dexamethasone	1
digitalis	1
Diupres	1
Dristan	1
Edecrin	1
Esidrex	1
Feosol	1
Hycodan	1
Ipecac	1
Ismelin	1
Kantrex	1
Lanoxin	1
Levo Phed	1
nitroglycerin	1
Norlestrin	1
Ornade	1
Pentothal	1
Phenergan	1
Prednisone	1
Pyribenzamine	1
Pyridium	1
Robaxin	1
Solu-Medrol	1
streptomycin	1
sugar	1
Sumycin	1
Tuss-Ornade	1
vitamin, unspecified	1
water, steriie	1
	Total 178

UNIDENTIFIED DRUGS[a]

Total 52

TOTAL LISTINGS 620

[a] Unidentified drugs are those in Sample 1 with some coding error that prevented identification.

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Table B.5c. Medications Used in Treatment for Fatal Dose
(Listed in Part V, Questions 8-11, UCI Reporting Form)
Sample 2: Summary of Drug Type by City

City:	CHGO	CLVD	DALLAS	L A	MIAMI	N Y	PHIL	S F	WASH	Row Total Col %
Cases:	128	69	61	144	80	240	103	104	75	1004
Narcotics	1	5	1	5	3	6	6	0	1	28 19.7
Analgesics	0	0	2	0	0	0	1	0	0	3 2.1
Barbiturates	0	1	0	0	0	1	2	0	0	4 2.8
Tranquilizers	0	0	1	0	0	0	1	0	0	2 1.4
Miscellaneous	0	8	20	9	16	3	49	0	0	105 74.0
Total listings	1	14	24	14	19	10	59	0	1	142
% of total by city	0.7	9.9	16.9	9.9	13.4	7.0	41.5	0	0.7	100.0
Information given on treatment in N cases	18	12	14	30	14	13	21	9	12	143
Treated cases as % of all treated (143)	12.6	8.4	9.8	20.8	9.8	9.1	14.7	6.3	8.4	100.0
Treated cases as % of each city's total cases	14.1	17.4	23.0	20.8	17.5	5.4	35.6	8.7	16.0	

(Table continued)

Table B.5c. Medications Used in Treatment for Fatal Dose
(Listed in Part V, Questions 8-11, UCI Reporting Form)
Sample 2: Listings of Specific Drugs by City

CHICAGO - 1 listing (128 cases)

Narcotics	1 total
naloxone HCl (Narcan)	1

CLEVELAND - 14 listings (69 cases)

Narcotics	5 total
methadone	1
naloxone HCl (Narcan)	3
nallorphin (Nalline)	1
Barbiturates	1 total
phenobarbital	1
Miscellaneous	8 total
Ampiciliin	1
Aramine injection	1
dexamethason (Decadron)	1
Garomycin	1
caphalothin sodium (Keflin)	1
sodium bicarbonate	1
sodium chloride	1
methylprednisolone (Solu-Medro)	1

DALLAS - 24 listings (61 cases)

Narcotics	1 total
naloxone HCl (Narcan)	1
Analgesics	2 total
acetaminophen (Tylenol)	2
Tranquilizers	1 total
diazepam (Valium)	1
Miscellaneous	20 total
aminophylline	1
Atropine	1
Dopamine	1
Epinephrine	1
isoproterenol HCl (Isuprel)	2
Keflin	2
Lanoxin	1
furosemide (Lasix)	1
Levo-Phed	1
lidocaine	2
magaldrate (Riopan)	1
sodium bicarbonate	4
hydrocortisone (Solu-Cortef)	1
theofenol	1

(Table continued)

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Medications Used In Treatment

<u>LOS ANGELES</u> - 14 listings (144 cases)

Narcotics	5 total
naloxone HCl (Narcan)	5
Miscellaneous	**9 total**
Epinephrine	5
Pronestyl	1
sodium bicarbonate	2
sterile water	1

<u>MIAMI</u> - 19 listings (80 cases)

Narcotics	3 total
naloxone HCl (Narcan)	3
Miscellaneous	**16 total**
adrenalin	1
Antilirium	1
Atropine	1
Digoxin	1
Dopamine	1
Dopramine	1
Epinephrine	3
Keflin	2
Lasix	3
Mannitol	1
Medrol	1

<u>NEW YORK</u> - 10 listings (240 cases)

Narcotics	6 total
naloxone HCl (Narcan)	4
morphine "blue"	2
Barbiturates	**1 total**
amobarbital (Amytal)	1
Miscellaneous	**3 total**
Dopamine	1
Epinephrine	1
sodium bicarbonate	1

(Table continued)

<u>PHILADELPHIA</u> - 59 listings (103 cases)

Narcotics	6 total
naloxone HCl (Narcan)	6
Analgesics	**1 total**
acetaminophen (Tylenol)	1
Barbiturates	**2 total**
amobarbital (Amytal)	1
secobarbital (Seconal)	1
Tranquilizers	**1 total**
diazepam (Valium)	1
Miscellaneous	**49 total**
adrenalin	2
ampicillin	1
Aramine injection	2
Atropine	3
calcium chloride	2
calcium gluconate	3
dexamethasone (Decadron)	1
diuretic, misc. (unspec.)	1
Dopramin	1
Epinephrine	7
gentamicin (Garamycin)	3
glucose	1
hormone, misc. (unspec.)	1
insulin	1
isoproterenol (Isuprel)	4
furosemide (Lasix)	3
Levo-Phed	1
diuretic (Mannitol)	1
penicillin (and penicillin Vk)	2
sodium bicarbonate	5
methylprednisolone (Solu-Medrol)	1
xanthine deriv. (Tensodin)	1
tetracycline	1
thiamine HCl	1

<u>SAN FRANCISCO</u> - 0 listings (104 cases)

<u>WASHINGTON, D.C.</u> - 1 listing (75 cases)

Narcotics	1 total
naloxone HCl (Narcan)	1

City:	CHGO	CLVD	DALLAS	L A	MIAMI	N Y	PHIL	S F	WASH	Row Total Col %
Cases:	128	69	61	144	80	240	103	104	75	1004
Narcotics	0	0	1	0	4	1	4	2	3	15 5.8
Analgesics	0	0	3	1	8	0	6	3	0	21 8.1
Barbiturates	0	0	1	0	1	0	2	1	0	5 1.9
Sedatives	2	0	1	0	8	0	6	3	0	20 7.7
Tranquilizers	3	1	6	2	15	1	27	4	0	59 22.7
Psychostimulants	0	0	1	0	0	0	1	1	1	4 1.5
Antidepressants	0	0	2	0	4	1	3	1	0	11 4.2
Marijuana and Psychedelics	0	0	0	0	0	0	0	0	2	2 0.8
Miscellaneous	5	1	23	0	48	1	31	14	0	123 47.3
Column total N.	10	2	38	3	88	4	80	29	6	260
Row %	3.8	0.8	14.6	1.2	33.8	1.5	30.8	11.2	2.3	100.0

Table B.5d. Drugs and Medication Recently Used
(Listed in Part V, Questions 12-16, UCI Reporting Form)

Drugs and medications taken within two weeks of death for medical or nonmedical purposes, excluding drugs involved in the death (1, 19) and drugs used in treatment prior to death (V, 8-11).

CHICAGO - 10 listings (128 cases)

Sedatives	2 total
"downers"	1
ethchlorvynol (Placidyl)	1
Tranquilizers	3 total
diazepam (Valium)	3
Miscellaneous	5 total
Allerest	1
Dilantin (diphenylhydantoin sodium)	1
Insulin	1
Pro-Banthine (probatheline bromide)	1
Ritalin (methylphenidate)	1

CLEVELAND - 2 listings (69 cases)

Tranquilizers	1 total
chlordiazepoxide	1
Miscellaneous	1 total
Butazolidin (phenylbutazone)	1

DALLAS - 38 listings (61 cases)

Narcotics	1 total
meperidine HCl (Demerol)	1
Analgesics	3 total
acetaminophen (Tylenol)	1
butalbital + APC (Fiorinal)	1
D-propoxyphene (Darvon)	1
Barbiturates	1 total
phenobarbital	1
Sedatives	1 total
flurazepam (Dalmane)	1
Tranquilizers	6 total
diazepam (Valium)	4
thioridazine (Mellaril)	2
Psychostimulants	1 total
D-amphetamine + amobarbital (Dexamyl)	1
Antidepressants	2 total
amitriptyline (Elavil)	2

(Table continued)

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Other Drugs Recently Used

DALLAS - continued

Miscellaneous   23 total

Aldoril (methyldopa + hydro-chlorothiazide)	1
Atromids-S (clotibrate, antilipidemic)	1
Coumadin (warfarin sodium)	1
DBI (phenformin HCl)	1
Dilantin (diphenylhydantoin)	2
Dyazide (triamterine + hydrochlorothiazide)	1
Esidrix (hydrochlorothiazide)	1
Estinyl (ethinyl estradiol)	1
Inderal (propanolol HCl)	1
Indocin (indomethacin)	1
Ircon (ferrous fumarate)	1
Ismelin (guanethidine monosulfate)	1
Isordil (isosorbide dinitrate)	1
Lanoxin (digitalis)	1
Lasix (furosemide)	1
Lomotil (diphenyloxilate HCl + atropine)	1
Mephyton	1
Motrin (ibuprofen)	1
nitroglycerine	1
Pathibamate (tridihexethyl chloride + meprobamate)	1
Ser Ap Es (reserpine compound)	1
Tegopen (pencillin)	1

LOS ANGELES - 3 listings (144 cases)

Analgesics   1 total

phenacetin, aspirin, phenobarb, pheniramine, phenylephrine HCl)	1

Tranquilizers   2 total

diazepam (Valium)	1
phenothiazine	1

MIAMI - 88 listings (80 cases)

Narcotics   4 total

meperidine (Demerol)	2
oxycodone HCl (Percodan)	2

Analgesics   8 total

acetaminphen (Tylenol)	1
APC (Empirin Compound)	2
butalbital + APC	L
D-propoxyphene (Darvon, Darvo-Tran)	3
promethazine + APC (Synalgos)	1

Barbiturates   1 total

phenobarbital	1

Sedatives   8 total

ethchlorvynol (Placidyl)	1
flurazepam (Dalmane)	5
methyprylon (Noludar)	1
nitrazepam (Mogadan)	1

MIAMI - continued

Tranquilizers   15 total

chlordiazepoxide (Librium)	2
chlorpromazine (Thorazine)	2
clorazepate (Tranxene)	1
diazepam (Valium)	7
meprobamate	2
perphenazine + amitriptyline (Triavil)	1

Antidepressants   4 total

amitriptyline (Elavil)	2
imipramine (Tofranil)	2

Miscellaneous   48 total

Aldactazide	1
ampicillin	1
analgesics with codeine (Tylenol, Ban-Caps C)	2
antibiotics (Erythrocin, Achromycin V, unspecified)	4
Antivert	1
Bacid	1
Bonine (meclazine HCl)	1
Chlor-trimeton (chlorpheniramine)	1
Cogentin (benzotropine mesylate)	1
Combid (prochlorperazine + anti-cholinergic)	1
Digoxin	1
Dilantin (diphenylhydantoin)	5
diphenhydramine	1
Diuril (chlorothiazide MSD)	1
Dopar (levo-dopa)	1
Drixoral (anti-histamine + vasoconstrictor)	1
Entozyme (enzyme)	1
HydroDiuril	1
Inderal (propanolol)	1
insulin	1
Lanoxin (digitalis)	1
Librax (Librium + anticholinergic)	1
lipotropic, unspecified	1
Lomotil (diphenoxylate)	1
Motrin (ibuprofen)	1
Neggram (nalidixic acid)	1
nitroglycerin	2
Ornex (acetaminophen + vasoconstrictor)	1
Parafon forte (chlorzoxazone + acetaminophen)	1
Premarin	2
Pro-Banthine(propantheline bromide)	1
quinidine	1
Serpasil (reserpine + hydralazine)	1
Surfak	1
thyroid	1
urinary antiseptic, unspecified	1
Valpin	1

(Table continued)

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NEW YORK - 4 listings (240 cases)

Narcotics	1 total
methadone	1

Tranquilizers	1 total
trifluoperazine (Stelazine)	1

Antidepressants	1 total
imipramine (Tofranil)	1

Miscellaneous	1 total
Artane (trihexyphenidyl HCl)	1

PHILADELPHIA - 80 listings (103 cases)

Narcotics	4 total
codeine sulfate	1
hydromorphone (Dilaudid)	1
methadone	1
oxycodone HCl (Percodan)	1

Analgesics	6 total
acetaminophen (Tylenol)	1
analgesic, unspecified	1
D-propoxyphene (Darvon, Darvon 65, Carvocet-N)	3
pentazocine (Talwin)	1

Barbiturates	2 total
secobarbital (Seconal)	1
seco-amobarbital (Tuinal)	1

Sedatives	6 total
chloral hydrate	2
flurazepam (Dalmane)	3
triclofos sodium (Triclos)	1

Tranquilizers	27 total
chlordiazepoxide (Librium)	2
chlorpromazine	1
diazepam (Valium)	12
doxepin (Sinequan)	1
fluphenazine HCl (Prolixin)	1
haloperidol (Haldol)	1
hydroxyzine pamoate (Vistaril)	1
thioridazine (Mellaril)	4
chlorpromazine (Thorazine)	2
trifluoperazine HCl (Stelazine)	2

Psychostimulants	1 total
cocaine	1

Antidepressants	3 total
amitriptyline (Elavil)	1
desipramine (Norpramin)	1
imipramine (Tofranil)	1

Miscellaneous	31 total
"Drug unknown"	4
Ampicillin	1
Aramine injection	1
aureomycin	1
Benadryl (diphendydramine)	1
Bentyl (dicyclamine HCl + phenobarbital	1
Cogentin (benzotropine mesylate)	1
Cyclospasmol	1
Dilantin	1
ferrous gluconate	1
ferrous sulfate (Feosol)	2

Miscellaneous, continued

HydroDiuril	1
hypoglycemic agent	1
hypotensive, unspecified	1
insulin	1
Keflex	1
Lomotol (diphenoxylate)	1
Macrodantin (introfurantoin)	1
oral contraceptive	1
Pathibamate (anticholinergic + meprobamate)	1
sodium bicarbonate	1
steroid, unspecified	1
terpin hydrate	1
vitamins (C; unspecified)	3
xanthine derivative, unspec.	1

SAN FRANCISCO - 29 listings (104 cases)

Narcotics	2 total
levorphanol tartrate (Levo-Droman)	1
meperidine	1

Analgesics	3 total
APC compound (Empirin)	1
pentazocine	1
propoxyphene (Darvon-N)	1

Barbiturates	1 total
seco-amobarbital (Tuinal)	1

Sedatives	3 total
flurazepam	3

Tranquilizers	4 total
chlordiazepoxide	1
clorazepate (Tranxene)	1
diazepam	2

Psychostimulants	1 total
amphetamine (Biphetamine)	1

Antidepressants	1 total
perphenazine + amitriptyline (Tofranil)	1

Miscellaneous	14 total
APC compound + codeine	1
Cogentin (benzotropine mesylate)	1
Coumadin (warfarin sodium)	1
Dyazide (triamterene + hydrochlorothiazide)	3
Inderal (propanolol)	1
Mysoline (primidone)	1
penicillin (Pentids, G, UK)	3
phenobarbital + belladonna	1
Soma (carisprodol)	1
Synthroid (sodium levothyroxine)	1

WASHINGTON, D.C. - 6 listings (75 cases)

Narcotics	3 total
heroin	2
methadone	1

Psychostimulants	1 total
cocaine	1

Marijuana and psychedelics	2 total
marijuana	1
PCP	1

Table B.6a. Sample 2: History of Drug Use
(Listed in Part VI, Questions 18 and 19, UCI Reporting Form)
Summary of Drug Type by City

City:		CHGO	CLVD	DALLAS	L A	MIAMI	N Y	PHIL	S F	WASH	Row N Col %
Cases:		128	69	61	144	80	240	103	104	75	1004
Question 18: DECEASED HAD HISTORY OF DRUG ADDICTION, DEPENDENCE, OR CHRONIC USE:											
YES Cases N		55	24	15	66	23	196	51	25	44	499
% of city's cases		43.0	34.8	24.6	45.8	28.8	81.7	49.5	24.0	58.7	49.7
Question 19: IF RESPONSE TO #18 ABOVE IS "YES," SPECIFY DRUGS: (4 possible listings)											
Narcotics	N	23	25	3	49	19	177	23	9	30	358
	Col %	34.3	89.3	16.7	62.0	32.2	79.7	32.4	33.3	60.0	57.6
Analgesics	N	0	0	3	1	2	3	0	2	0	11
	Col %	.		16.7	1.3	3.4	1.3		7.4		1.7
Barbiturates	N	1	0	1	6	1	7	9	1	0	26
	Col %	1.4		5.5	7.6	1.7	3.2	12.7	3.7		4.2
Sedatives	N	5	0	0	1	4	2	2	0	0	14
	Col %	7.5			1.3	6.8	0.9	2.8			2.2
Tranquilizers	N	5	0	4	2	6	6	5	0	0	28
	Col %	7.5		22.2	2.5	10.1	2.7	7.0			4.5
Psychostimulants	N	0	0	0	2	5	3	5	1	3	19
	Col %				2.5	8.5	1.3	7.0	3.7	6.0	3.1
Antidepressants	N	0	0	0	0	1	3	0	0	0	4
	Col %					1.7	1.3				0.6
Marijuana & psychedelics	N	4	0	0	3	0	0	5	0	5	17
	Col %	6.0			3.8			7.0		10.0	2.7
Ethanol	N	7	1	0	9	19	0	0	10	1	47
	Col %	10.4	3.6		11.4	3.2			37.1	2.0	7.6
Drug unknown	N	20	2	4	6	1	22	19	4	11	89
	Col %	29.9	7.1	22.2	7.6	1.7	9.9	26.8	14.8	22.0	14.3
Miscellaneous	N	2	0	3	0	1	0	3	0	0	9
	Col %	3.0		16.7		1.7		4.3			1.5
TOTAL LISTINGS	N	67	28	18	79	59	223	71	27	50	622
	Row %	10.8	4.5	2.9	12.7	9.5	35.9	11.4	4.3	8.0	100.0
	Col %	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

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Table B.6b. Sample 2. History of Drug Addiction, Dependence,
or Chronic Use (Part VI, Question 19, UCI Reporting Form)
Listing of Specific Drugs by City

CHICAGO - 67 listings (128 cases)		LOS ANGELES - 79 listings (144 cases)	
Narcotics	**23 total**	**Narcotics**	**49 total**
heroin	11	codeine	1
methadone	1	heroin	17
morphine	6	morphine	31
narcotic unspecified	5	**Analgesics**	**1 total**
Analgesics	**0**	acetaminophen (Tylenol)	1
Barbiturates	**1 total**	**Barbiturates**	**6 total**
pentobarbital (Tuinal)	1	secobarbital (Seconal)	4
Sedatives	**5 total**	seco-amobarbital (Tuinal)	1
"downers"	2	barbiturate, unspecified	1
ethchlorvynol	1	**Sedatives**	**1 total**
glutethimide	1	"downers"	1
methaqualone	1	**Tranquilizers**	**2 total**
Tranquilizers	**5 total**	chlordiazepoxide	1
diazepam (Valium)	5	meprobamate	1
Psychostimulants	**0**	**Psychostimulants**	**2 total**
Antidepressants	**0**	amphetamine	1
Marijuana & psychedelics	**4 total**	dextroamphetamine	1
Marijuana	4	**Marijuana & psychedelics**	**3 total**
Ethanol	**7 total**	LSD	1
"Drug unknown"	**20 total**	marijuana	2
Miscellaneous	**2 total**	**Ethanol**	**9 total**
diphenylhydantoin	1	**"Drug unknown"**	**6 total**
paregoric	1		

CLEVELAND - 28 listings (69 cases)		MIAMI - 40 listings (80 cases)	
Narcotics	**25 total**	**Narcotics**	**19 total**
heroin	15	heroin	11
heroin and quinine	1	meperidine	1
methadone	3	methadone	2
morphine	6	morphine	5
Ethanol	**1 total**	**Analgesics**	**2 total**
"Drug unknown"	**2 total**	D-propoxyphene (Darvon)	2
		Barbiturates	**1 total**
DALLAS - 18 listings (61 cases)		pentobarbital (Nembutal)	1
Narcotics	**3 total**	**Sedatives**	**4 total**
meperidine (Demerol)	2	ethchlorvynol (Placidyl)	1
heroin	1	methaqualone (Quaalude)	2
Analgesics	**3 total**	chloral hydrate	1
acetaminophen (Tylenol)	1	**Tranquilizers**	**6 total**
pentazocine (Talwin)	2	chlordiazepoxide (Librium)	1
Barbiturates	**1 total**	chlorpromazine (Thorazine)	1
secobarbital	1	diazepam (Valium)	4
Tranquilizers	**4 total**	**Psychostimulants**	**5 total**
chlordiazepoxide (Librium)	1	cocaine	5
diazepam (Valium)	3	**Antidepressants**	**1 total**
"Drug unknown"	**4 total**	amitriptyline (Elavil)	1
Miscellaneous	**3 total**	**"Drug unknown"**	**1 total**
propylhexadrine (Benzedrex inhaler)	2	**Miscellaneous**	**1 total**
paint	1	primidone (Mysoline)	1
		(Table continued)	

Drug History

NEW YORK - 242 listings (240 cases)

Narcotics	177 total
codeine	2
heroin	94
methadone	79
oxycodone HCl (Percodan)	1
narcotic unspecified	1
Analgesics	3 total
D-propoxyphene (Darvon)	3
Barbiturates	7 total
barbituric acid	1
phenobarbital	1
secobarbital	1
seco-amobarbital (Tuinal)	3
barbiturate unspecified	2
Sedatives	2 total
"downers"	1
flurazepam	1
Tranquilizers	6 total
acepromazine	1
diazepam (Valium)	5
Psychostimulants	3 total
amphetamine ("uppers")	1
cocaine	2
Antidepressants	3 total
amitriptyline	3
Ethanol	19 total
"Drug unknown"	22 total

PHILADELPHIA - 71 listings (103 cases)

Narcotics	23 total
heroin	19
meperidine	1
narcotic unspecified	2
Barbiturates	9 total
secobarbital (Seconal)	1
seco-amobarbital (Tuinal)	4
barbiturate unspecified	4
Sedatives	2 total
"downers"	1
glutethimide (Doriden)	1

PHILADELPHIA, continued

Tranquilizers	5 total
diazepam (Valium)	4
tranquilizer unspecified	1
Psychostimulants	5 total
amphetamine ("uppers")	3
methamphetamine (Desoxyn)	1
"speed"	1
Marijuana & psychedelics	5 total
LSD	2
marijuana	2
"pot"	1
"Drug unknown"	19 total
Miscellaneous	3 total
cleaning fluid	2
methylphenidate (Ritalin)	1

SAN FRANCISCO - 27 listings (104 cases)

Narcotics	9 total
heroin	6
narcotic unspecified	3
Analgesics	2 total
D-propoxyphene (Darvon)	2
Barbiturates (unspecified)	1 total
Psychostimulants	1 total
cocaine	1
Ethanol	10 total
"Drug unknown"	4 total

WASHINGTON, D.C. - 50 listings (75 cases)

Narcotics	30 total
heroin	30
Psychostimulants	3 total
cocaine	1
phenmetrazine (Preludin)	2
Marijuana & psychedelics	5 total
LSD	1
Marijuana	2
PCP	2
Ethanol	1 total
"Drug unknown"	11 total

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National Institute on Drug Abuse

Research

monograph series

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