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A Report to the Attorney General from the Department of Justice Drug-Facilitated Rape Working Group

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Administration, the Violence Against Women Act office, the Violence Against Women Grants Office, the Office for Victims of Crime, the Office of Consumer Litigation, the Criminal Division's Narcotics and Dangerous Drugs Division, the Executive Office of the United States Attorneys, and the Federal Bureau of Investigation. Representatives from the Office of the Attorney General, the Office of the Deputy Attorney General, the Office of the Associate Attorney General, and the Office of Intergovernmental Affairs participated in the work group meetings and provided comments as well.

This document reports on the data available to answer the question of how often drug-facilitated rape occurs. There are no national statistics for this offense such as would be provided by the Uniform Crime Reports, the National Criminal Victimization Survey, or the National Judicial Reporting Program. Consequently, a thorough review of other, non-national-level research on this issue was undertaken. This search revealed that no empirical and scientifically reliable data exist to answer the question.

The issue was therefore investigated using a number of other methods and perspectives -- ethnographic, print media- and Internet-based, law enforcement, victim advocacy, policy maker and pharmaceutical industry interests -- taking into account a considerable amount of conflicting information and differing viewpoints. What was learned suggests that the incidence of this offense is rare, particularly in the larger context of sexual assault and its subclass, acquaintance rape.

Since 1993, there have been 5 trials involving the drug flunitrazepam (Rohypnol) with a total of 8 defendants, all in state courts. The most recent trial was concluded last month in Santa Monica and resulted in a guilty verdict against the defendants, two brothers charged with assaulting 5 women. Guilty verdicts were reached in all of the other cases, as well. There have also been two trials against defendants charged with drug-facilitated rape in which the substance alleged to have been used was gamma-hydroxybutyrate (GHB). Both cases resulted in guilty verdicts.

A few cases were identified in which victims believed they were drugged and raped but for evidentiary and other reasons the cases were prosecuted either as rape or as drug possession / distribution cases. Additionally, a few incidents of drug-facilitated rape have been identified where no action was taken beyond initial investigation of the incident, generally for evidentiary reasons.

The rate of drug-facilitated rape is likely low. A potential for increasing numbers of incidents in the future exists, however. The circumstances that set the stage for the series of drug-facilitated rapes verified to date are in some instances new, and may prove to be enduring, features of our culture.

The problems faced by researchers attempting to measure the scope of the problem and by law enforcement investigators needing to verify these incidents are considerable. The number of suspicions or allegations by rape victims that they were drugged may be in the thousands, although attempts to verify

the use of these or other drugs in the incidents have been inconclusive.

Further complicating study of this situation is that the drugs can produce amnesia to the point that victims don't even know that they have been raped, or that they were drugged and raped as a result.

This report outlines policy recommendations and a research agenda that could address the problems with efforts to date to study the incidence of this offense. An important point in considering policy recommendations is that any practices and strategies which reduce sexual assault will reduce drug-facilitated sexual assault.

This report was generated for your information only. There are, at this point, no plans for publication. If it is of interest to you, we would be happy to brief you on this report. *

* Can be released to the public, per NIJ 2/23/00

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Preface

In December 1997, the Attorney General directed that DOJ quantify the problems posed by so-called date-rape drugs. NIJ was designated the lead agency in this effort.

In response, NIJ assigned staff in its Office of Research and Evaluation to compile the existing data on drug-facilitated rape and draft a report on their findings. A work group chaired by NIJ Director Travis and comprising members from across Department of Justice agencies met regularly during the process to review findings and offer suggestions for the report. The work group included staff from the Office of Science and Technology at NIJ, the Drug Enforcement Administration, the Violence Against Women Act office, the Violence Against Women Grants Office, the Office for Victims of Crime, the Office of Consumer Litigation, the Criminal Division's Narcotics and Dangerous Drugs Division, the Executive Office of the United States Attorneys, and the Federal Bureau of Investigation. Representatives from the Office of the Attorney General, the Office of the Deputy Attorney General, the Office of the Associate Attorney General, and the Office of Intergovernmental Affairs participated in the work group meetings and provided comments as well.

Executive Summary

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Since 1993, there have been 5 trials involving the drug flunitrazepam (Rohypnol) with a total of 8 defendants, all in state courts. The most recent trial was concluded last month in Santa Monica and resulted in a guilty verdict against the defendants, two brothers charged with assaulting 5 women. Guilty verdicts were reached in all of the other cases, as well.

There have also been two trials against defendants charged with drug-facilitated rape in which the substance alleged to have been used was gamma-hydroxybutyrate (GHB). Both cases resulted in guilty verdicts.

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reasons.

The rate of drug-facilitated rape is likely low. A potential for increasing numbers of incidents in the future exists, however. The circumstances that set the stage for the series of drug-facilitated rapes verified to date are in some instances new, and may prove to be enduring, features of our culture. For example:

- The term "date rape drugs" appeared only within the last several years. The idea, however inaccurate, that there are only now drugs available suited to the facilitation of rape, has gained a currency which itself is dangerous by introducing the idea.

- The drugs primarily associated with date rape, flunitrazepam (trade name Rohypnol) and gamma-hydroxybutyrate (GHB), are readily obtained despite the fact that they are illegal. The illegal trade of prescription drugs such as Rohypnol, Ritalin, and Klonopin, particularly through Mexican vendors, is on the rise. GHB is even more easily obtained since it can be made in a kitchen using a simple process from instructions found on the Internet.

- These two drugs are used primarily voluntarily and their popularity is increasing. They are used by middle and high school students, college students, and dance club attendees in order to produce a relaxed, uninhibited feeling. The more common their voluntary use is, the more available they are in those cases where someone wishes to use them to facilitate rape.

While the number of suspicions or allegations by rape victims that they were drugged may be in the thousands, attempts to verify the use of these or other drugs in the incidents have been inconclusive. The problems faced by researchers attempting to measure the scope of the problem and by law enforcement investigators needing to verify these incidents are considerable:

- Victims may be confused about what happened to them and delay making an allegation. Any delay in rape investigation increases the likelihood that evidence will be lost.

- The period during which the drugs remain in the body and are thus detectable in urine is short. To obtain evidence of the use of GHB, urine needs to be collected within 8-12 hours.

- Few labs are equipped to perform the procedures that will detect the drugs or will recognize need to use specially developed techniques looking for any of a number of drugs.

Further complicating study of this situation is that the drugs can produce amnesia to the point that victims don't even know that they have been raped, or that they were drugged and raped as a result.

This report outlines policy recommendations and a research agenda that could address the problems with efforts to date to study the incidence of this offense. An important point in considering policy recommendations is that any practices and strategies which reduce sexual assault will reduce drug-facilitated sexual assault. These include:

- Educational programs designed to reach out to potential victims of drug-facilitated rape, particularly among high risk populations: high school and college age students and people who frequent nightclubs and resorts.

- Guidelines for practitioners to coordinate efforts among the police, emergency response technicians and professionals, nurse examiners, etc.

- Training for professionals, based on guidelines. Guidelines should include development of techniques for identifying cases where victims were not even aware that they were assaulted or that an assault was drug-facilitated.

A possible research agenda to collect comprehensive data on the incidence of drug-facilitated rape, the characteristics of the offense in the context of acquaintance rape, and special research methods that address the problems inherent in investigation and prosecution, could include the following:

- Expansion of existing federal data systems to provide information on drug-facilitated rape. The National Crime Victimization Survey may be an appropriate means for collecting population-based information on the incidence of this offense.

- Collection of new data in areas of pharmacology and offender profiling.

- A major, multi-year, multi-method research initiative structured as 4 studies designed to measure the incidence of drug-facilitated rape among suspected cases, within the general population, among high risk communities, and in the context of acquaintance rape.

- Funding of development on new drug detection technology, such as hair analysis methods.

Introduction

More than 430,000 sexual assaults occur annually in the United States. In an unknown fraction of these rapes, perpetrators use drugs to subdue their victims prior to assault. A number of such assaults and increases in the recreational consumption of the drugs used in these assaults has brought drug-facilitated rape into sharp focus in recent years.

A scan of media reports from the past few years on the dangers of and responses to drug-facilitated rape indicate that policy makers reacted quickly and with a range of responses. Response by the public and policy makers came well before research was able to provide a better understanding of the problem's scope. Current research may fail to meet the challenges this difficult issue poses, in part because the drugs implicated in sexual assault are difficult to detect and because victims have little or no recollection of events following their ingestion.

The working group has identified 7 trials since 1993 of drug-facilitated rape involving the substances most often implicated in the offense. 5 trials involving the drug flunitrazepam (Rohypnol), with a total of 8 defendants and 10 victims, have been conducted. DEA staff have been contacted regarding another 16 alleged incidents of flunitrazepam-related rape where the case was prosecuted as drug possession/distribution, there was no suspect, the victim or the State chose not to put forward charges, or insufficient evidence existed. (The DEA staff person assigned to track trafficking and distribution data on this Schedule IV controlled substance has become a national source of information on its use in rape incidents as well.)

Two trials involving gamma-hydroxybutyrate (GHB) to facilitate rape have been identified, both including multiple defendants who committed offenses against several women.

The FBI's toxicology laboratories are available to local law enforcement agencies who need help in identifying substances that the labs available to them are not equipped to detect. Since February of 1998, the FBI lab has received (or is due to receive) a total of 10 urine specimens from rape victims where there was a reasonable degree of evidence that a drug was clandestinely

administered, and the specimen collected was urine (rather than blood) and a minimal amount of time elapsed between ingestion and collection. (In that same period, around 20 cases were turned away because these conditions were not met, or else the local agency was not willing to wait up to a year for the results.) The FBI toxicology lab is developing procedures to test for a number of benzodiazepines beyond flunitrazepam, as well as GHB, and will apply those procedures in their testing.

It isn't known how many incidents of drug-facilitated rape involving flunitrazepam, GHB or other substances have been alleged or prosecuted. Comprehensive statistics on complaints, investigations, arrests, cases prosecuted, and cases where a conviction was obtained for incidents of drug-facilitated rape do not exist. The Internet has many sites offering information about "date rape drugs" but much of it is inaccurate. In some cases, the number of verified incidents of drug-facilitated rape are confused with seizure and trafficking data on cases of possession of the drug, resulting in highly exaggerated estimates. Misinformation about the pharmacological properties of the drugs is put forward by both opponents and proponents of the drugs.

Despite the relatively small number of cases where forensic evidence has been found to link a rape with one of these drugs, rape crisis centers and law enforcement agency personnel tell of growing numbers of cases where women believe that they have been drugged and raped. It is not possible to estimate the number of incidents that have occurred. Information gathered for this report suggests that its magnitude is small. The issue, however, is very serious and warrants attention.

Outline of Report

This report addresses the issue of drug-facilitated rape in three main sections. The first section explores what is known about acquaintance rape, the different drugs that could be used to facilitate rape, and the identification of Rohypnol and GHB as "date rape drugs" through media reports on their dangers. In the second section, the measurement of its incidence and the way

that the problem has been responded to is discussed. Existing sources of data are presented that shed light on the use and availability of the drugs, and an evaluation of current efforts to measure the problem is outlined. The response of policy makers, victim advocates, and the pharmaceutical industry is also addressed.

The third section offers recommendations on what can be done in the face of this difficult problem. Information gathered through this report indicates that there is much to be learned about drug-facilitated rape. For example: What is the incidence of this offense? How are drugs associated with rape different from, or similar to, alcohol as a facilitator of sexual assault? What other drugs could be used to facilitate rape and what are they? Who are the individuals most likely to commit the offense? What are the circumstances under which such incidents occur? What are the risk factors involved? Current research efforts cannot answer these questions. This report offers a number of ways that research could be structured to provide some answers and suggests policy areas and actions appropriate for responding to a potentially growing problem.

The Scope of the Problem

Rape and Sexual Assault

Traditionally, rape was the legal term for "carnal knowledge [penile-vaginal penetration only] of a female forcibly against her will" (Bienan, 1980). Sexual assault is a gender-neutral synonym for rape. Definitions of rape and sexual assault have recently been broadened to include sexual penetration of any type, including vaginal, anal, and/or oral penetration whether by the penis, fingers, or objects (Crowell & Burgess, 1996).

Rape is unlike every other kind of violence because it is accomplished through sexual acts, and thus the sexual element is its most distinctive feature (Fairstein, 1993). Several factors contribute to the incidence and prevalence of sexual assault, including acceptance of interpersonal violence, adversarial stereotypes of male-female relationships, prevailing myths about rape, and sex role stereotyping (Schwartz, 1991). Surveys of adolescents suggest that they, in particular, have complicated views about forced sexual behavior. The American Medical Association (1995) summarized the findings of two surveys of American youth, and found that boys and girls justify forced sex under a variety of circumstances, including the boy spending money on the girl, the girl being "sexually experienced," a history of dating for six months or more, "when a girl gets a guy sexually excited," or when a girl agrees to have sex and then changes her mind (Schwartz, 1991; White & Humphrey, 1991). Malamuth (1989 a, b) reported that in a survey of male college students, between 16 and 20 percent indicated some likelihood of raping a woman if they were assured of getting away with it and between 36 and 44 percent indicated some likelihood of "forcing sex."

Estimates of the rate of sexual assault in the U.S. vary, primarily as a function of differences in definitions, methodology, and sampling. The National Victim Center and the National Crime Victims' Research and Treatment Center (1992) released the results of a longitudinal survey of 4,008 adult American women and found that 507 (13%) reported having been raped at least once. Based on these findings, the authors estimate that every year about 683,000 adult women are forcibly raped (The National Victim Center and the National Crime Victims' Research and

Treatment Center, 1992). According to The National Crime Victimization Survey (NCVS), a nationally representative sample of households reported a total of 430,000 sexual assaults in 1994 (Bureau of Justice Statistics, 1997).

Sexual assault by a stranger is least common, accounting for approximately 20% of sexual assaults against women (Heise, 1993). Acquaintance or date rape, generally defined as sexual assault in which the assailant is known to the victim (e.g., friends, acquaintances, intimates, family members), accounts for 80% of all sexual assaults.

The majority of sexual assaults go unreported and unrecognized. In 1995, only 97,460 forcible rapes were reported to the police, representing approximately 25% of the number of rapes victims reported in the National Crime Victimization Survey (Bureau of Justice Statistics, 1996). Some estimate that as many as 90% of all rapes go unreported (The National Victim Center and the National Crime Victims' Research and Treatment Center, 1992; Hughes & Sandler, 1987). Many factors may contribute to the under reporting of sexual assault including embarrassment, fear of further injury by the assailant, self-blame, and fear of court procedures that make a victim vulnerable to inquiries and judgment about behavior and history. Non-report by victims may also be a function of victims' beliefs that nothing can be done, that the rape is a private matter, that the rape was not important enough to warrant attention or fear of police response. False reports (that is, instances in which no sexual assault occurred and yet an individual reported a rape to the police) occur, but very rarely -- the FBI reports that false accusations account for only 2 percent of all reported sexual assaults. The rate is no higher than false reports for any other crime (National Coalition Against Sexual Assault, 1998).

Women and men of all races, ages, and religious, social and economic backgrounds can be victims of sexual assault, but those most at risk are the young -- 61 percent of all rape victims are less than 18 years of age, and 22 percent are between the ages of 18 and 24 (The National Victim Center and the National Crime Victims' Research and Treatment Center, 1992). Many victims have a close relationship with the attacker -- 9 percent of victims were raped by husbands or

ex-husbands, 11 percent by their fathers or step-fathers, 10 percent by boyfriends or ex-boyfriends, 16 percent by other relatives, and 29 percent by other non-relatives such as friends and neighbors (The National Victim Center and the National Crime Victims' Research and Treatment Center, 1992).

Alcohol and drugs, which can produce mood altering effects, are significant risk factors in sexual assault (Hughes & Sandler, 1987). A national survey based on a sample of students in higher education showed that 55 percent of female student victims of acquaintance rape and 74 percent of male student perpetrators self-reported using alcohol immediately before the assault (Koss, 1988). Recent research among college students has shown that self-reported alcohol use can predict sexual aggression (Maloy, C.E. (n.d); Koss, 1993).

Drugs Implicated in Sexual Assault

Using a drug in the commission of sexual assault presumes two strategies a perpetrator might use. One strategy is to disinhibit someone toward risky behavior such as engaging in sex and to make them less able to resist an attacker. The other strategy is to disable someone, perhaps to the point of unconsciousness, in order to commit an assault without any victim resistance. Using a drug surreptitiously to disable someone would have an added advantage if it resulted in amnesia that made the victim unaware later that she or he was drugged and assaulted.

Pharmacology

A number of drugs could be used to facilitate sexual assault. The drugs can be broadly classified into three categories: alcohol, benzodiazepines, and non-benzodiazepines. Each is discussed below.

Alcohol

Alcohol is a drug that is legal for adults and therefore easily obtained. It is used widely in the adult population for excitement and relaxation and to facilitate social relations. Binge drinking among adolescents and young adults continues to grow more common as an activity

among young people of both sexes, particularly college students. Although noncollege-age peers and high school students have shown a net decrease in occasions of heavy drinking since 1980, college students stand out as having maintained a very high rate of binge or party drinking. There is a notable difference in binge drinking between men and women, with 47% of college males reporting having five or more drinks in a row over the previous two weeks versus 35% of college females (Johnston L., 1996).

Alcohol has effects similar to those of central nervous depressant drugs such as benzodiazepines. It causes loss of coordination, slurred speech, and sleepiness. It can lower a drinker's inhibitions. The condition of "black out" (a temporary loss of vision, consciousness or memory) is not an unusual effect of drinking a large amount of alcohol (Jacobs, et al., 1987).

Alcohol is available in a variety of flavors, colors, and levels of potency. While beer and wine are the most popular forms of alcohol, there are more concentrated forms such as malt liquor, fortified wine, and distilled liquor. One way that younger drinkers increase the strength of alcohol drinks and therefore reduce their cost is to use grain alcohol, mixed with sugary fruit drinks or in "jello shooters" making the taste more palatable. In masking the taste of the alcohol, more can be consumed by those to whom the taste is not as familiar and enjoyable. It is possible, as well, to administer distilled alcohol, particularly grain alcohol, in drinks without signaling to the drinker the presence of alcohol.

Benzodiazepines

Benzodiazepines have been available by prescription since the late 1950's. They are used primarily to produce sedation, promote sleep, reduce or eliminate seizure activity, induce muscle relaxation, relieve anxiety, and to produce anterograde amnesia. [*Anterograde* amnesia is a condition in which events, during the time a drug or other agent is in effect, are not remembered (in contrast to *retrograde* amnesia in which events prior to the intervening agent are forgotten) and is considered a benefit in surgical procedures]. Benzodiazepines are used in the treatment of some disorders (e.g. Parkinson's Disease and cancer) that involve one or more of these

symptoms. Certain benzodiazepines, including flunitrazepam (marketed most commonly under the brand name Rohypnol), are used as preanesthetic medication because of their ability to relieve anxiety, generate a calm sedated state and produce anterograde amnesia. Benzodiazepines can be used to obtain tapered withdrawal from chronic use of other benzodiazepines, barbiturates, or alcohol. There are 15 FDA-approved benzodiazepines and some, but not all, are considered to be sedative hypnotics. These include: estazolam (Prosom), flurazepam (Dalmane), midazolam (Versed), quazepam (Dorol), temazepam (Restoril) and triazolam (Halcion.) Diazepam (Valium) and lorazepam (Ativan) are also used to some extent for sedation. One of the most commonly prescribed hypnotic sedatives outside of the United States is flunitrazepam (Rohypnol), a benzodiazepine approved for use in around 80 foreign countries but not in the U.S. and Canada.

Prescription benzodiazepines are generally packaged and sold in pill form. Different types vary in their rates of onset, potency and duration of action. Flunitrazepam has gained a reputation as a "date rape drug." It is odorless, colorless, dissolves to some degree in liquid, and is therefore thought to be not easily detected if surreptitiously added to drinks; it will mentally and physically incapacitate an individual, particularly in combination with alcohol; and is capable of producing anterograde amnesia. These characteristics are true for the other sedative hypnotics listed above. Flunitrazepam is estimated to be approximately 10 times more potent than diazepam, and triazolam is estimated to have approximately 6-10 times greater potency than flunitrazepam.

Triazolam, introduced in 1979 under the trade name Halcion, has been widely prescribed around the world and is noteworthy because it has been the subject of concern from the earliest time of its use. Reports of disinhibition and psychoses leading to suicide and murder have been connected to triazolam, particularly among elderly patients. Also, four cases of sexual assault through surreptitious administration of the drug prior to 1990 were documented in a Canadian study (Joynt, 1993). Triazolam produces disinhibition and amnesiac reactions, however, at no greater frequency than other benzodiazepines (Rothschild, 1992). A letter published in *Lancet* claimed that high doses of triazolam can bring on fantasies, sometimes sexual in nature. The

letter discussed 27 charges of sexual assault against dentists and physicians, most of which were later dismissed due to evidence from witnesses that the accounts of misuse were false (Brahams, 1989). The Netherlands withdrew approval of Halcion because of allegations that it is a dangerous drug, but the U.S. and Canada continue to allow its use.

Non-benzodiazepines (other sedatives/depressants)

A number of non-benzodiazepine drugs are, like benzodiazepines, sedative in effect, but not necessarily related in chemical structure to one another or to benzodiazepines. Those that have been associated (primarily anecdotally) with intentional drugging for the purpose of sedation include gamma hydroxybutyrate, chloral hydrate, scopolamine, ketamine, and in a very recent report (conversation with Sharon Kurn, Office of Consumer Litigation, DOJ, March 1998), the generic drug zolpidem. Zolpidem is a sedative hypnotic used to treat insomnia and is marketed widely in foreign countries, and in the U.S. under the trade name Ambien. Its French manufacturers call it the leading sedative hypnotic in the world.

Gamma-hydroxybutyrate (GHB) is a drug first synthesized in the 1920's (Marvel & Birkhimer, 1929) that occurs naturally in the human body, in minute amounts. In the late 1950's and early 1960's GHB was under development by a U.S. pharmaceutical company as an anesthetic agent, but the company eventually abandoned the drug. The FDA issued a warning in 1990 declaring the drug unsafe and illicit. GHB is marketed in some European countries as an adjunct to anesthesia, and is currently being tested for treatment of narcolepsy, as well as alcohol addiction and withdrawal (with mixed results) in Europe and in the U.S. (Mortality, M.C. et al. 1998; Rosen, M.I. et al. 1997). Until the FDA banned the drug in 1990, it was available through health food stores and was used by body-builders who assumed that it stimulates growth hormone release. More recently, GHB has become popular for recreational use to get high, particularly in dance clubs (Morbidity and Mortality Weekly Report, 1997) and is used very often in combination with alcohol (DEA, 1998).

GHB can be manufactured easily at home using a kitchen stove, and the recipe to make GHB can

be found on the Internet. The reaction is simple, not requiring any special conditions, chemicals or equipment. The chemicals are readily available from chemical supply stores. GHB is produced as a clear liquid and generally traded that way, but can be dried to a powder. The taste is slightly salty.

GHB has the potential to cause a significant incidence of abuse and adverse effects -- acute poisoning and overdose leading to coma and death have been associated with the drug (Galloway, 1997; MWR, 1997). The fact that it is homemade with little control over dosage gives it a greater potential for accidental overdose.

Chloral hydrate (conventionally, the drug in a "Mickey Finn" drink) is used medically before surgery to relieve anxiety and is combined with analgesics for pain relief, but it has also been known as a "knock out drug" and in a large enough dose can rapidly bring on unconsciousness, particularly in combination with alcohol. Common brand names for chloral hydrate are Noctec and Aquachloral and it is usually administered as a suppository or an orally-administered syrup or capsule.

Scopolamine, a naturally-occurring drug, plant-based and related to Belladonna, has been linked anecdotally to drug-facilitated rape (and to drug-facilitated robbery, said to be committed by prostitution rings against clients). It is approved for medical use, marketed under the names Transderm V and Transderm Scop and sold over the counter in light doses as a patch to prevent motion sickness and by prescription in larger doses for sedation and surgical pre-anesthesia. Web-site posts say that Ciba, the patch manufacturer, has recently stopped selling them, but there is no explanation why. There is a claim that it causes short-term memory loss (Drug Infonet, 1998).

Ketamine has been associated with drug-facilitated rape (RAINNews, 1998; Video Monitoring Services, 1997), but is mainly known as a party drug with "dissociative" and hallucinatory effects, and it is said to be replacing Ecstasy (MDMA) in dance clubs.

Flunitrazepam (Rohypnol) and GHB

The only substances discussed here that have been strongly linked through forensic investigation to cases of intentional drugging in order to commit sexual assault are Rohypnol and GHB and therefore this report will primarily address those two drugs. Rohypnol, manufactured by Hoffmann-LaRoche, is the leading brand name for the generic drug flunitrazepam. Flunitrazepam is also marketed as Hypnodorm, although not nearly as widely as Rohypnol. Users of flunitrazepam, regardless of actual manufacturer, refer to the drug as Rohypnol. Therefore, in this report the drug is referred to as Rohypnol where the discussion is about its reputation, trafficking, and use in the U.S.

Forensic Detection Methods of the Drugs

Alcohol

The most common method of testing for the presence of alcohol in the body is the Breathalyzer, the trade name for a device that uses the breath to estimate the level of alcohol in a person's blood. A blood analysis will also indicate the amount of alcohol in the blood; and urinalysis, as with the other methods, can detect alcohol in the body for a period not likely to exceed 12 hours, depending on quantity ingested, body size, etc. Because there is no metabolite left in the body, the window of opportunity for detection of alcohol is short in comparison to the time given by many drugs, including benzodiazepines.

Flunitrazepam

Reliable immunoassays for detection of the presence of undifferentiated (i.e., the general class of) benzodiazepines in urine and plasma have been available for several decades (Baselt, R.C. and R.H. Cravey, 1995). An immunoassay is a screening step that may need to be followed by a confirmatory procedure in order to avoid false *positive* readings. Depending on either the dosage level ingested, or the strength of the formula of a particular drug, however, a routine confirmatory procedure is necessary to avoid false *negatives*, as well. A single time dosage, for example, might not be detected through immunoassay. Newer types of

benzodiazepines on the market are much more effective than older benzodiazepines, but can be prescribed at much lower dosages. It is likely that these newer drugs (flunitrazepam falls into the middle range) would be missed by an immunoassay that would detect the older ones, such as Valium and Librium. Confirmatory procedures for determining specific benzodiazepines have only recently been established (Guichard, J. et al. 1993; Benhamou-Batut, F. et al., 1994; Weijars-Everhard, J.P. et al, 1994) but these methods fail to stand up to the requirements of the judicial system for forensic evidence.

Two articles published recently in the Journal of Analytical Toxicology (from work funded by Hoffmann-LaRoche, Inc., manufacturer of Rohypnol) explore the possibility of detecting the specific benzodiazepine flunitrazepam or one or more of its metabolites in urine, following human ingestion of doses varying from 1 mg to 4 mgs. The typically prescribed dose is 1 or 2 mgs. The question the researchers wanted to answer was whether a single time dose of 1-4 mgs could be detected in urine, given that the date rape scenario presupposes a single dose. An immunoassay (i.e. an initial screen not confirmed by a more sensitive procedure) method detected 7-amino-flunitrazepam (a metabolite) at the 4 mg dose, but not at the 1 mg dose. With gas chromatographic-mass spectrometric (GC-MS) analysis at the 1 mg dose, however, they were able to detect the metabolite up to 60 hours after ingestion (Salamone, et al, 1997; Elsohly, M.A., 1997).

Although it is possible to detect a flunitrazepam metabolite using gas chromatographic-mass spectrometry, laboratories accustomed to looking for the higher levels of the benzodiazepine metabolites using immunoassay would not necessarily see the need to take the procedure to the GC-MS stage of analysis, thus resulting in false negative reporting. The expense of GC-MS analysis and the greater sophistication of the appropriate standards would prohibit most labs from routinely conducting the test. This would be similarly true for detection of any benzodiazepine.

The analysis of hair to detect a single dose of flunitrazepam is a technology currently being explored by toxicologists, with recognition of its value in investigating allegations of

flunitrazepam-facilitated rape. It may be possible to extract evidence of use of flunitrazepam using a GC-MS method, for a period of up to several months. Currently, it has only been demonstrated that evidence of flunitrazepam use can be detected in the hair of a chronic user.

Gamma Hydroxybutyrate (GHB)

GHB is not typically included in drug screen panels, and most labs are not equipped to conduct an analysis. However, a reliable method of detection of non-endogenous GHB has been available since 1993 and can be carried out using the GC-MS technique employing selected ion monitoring, from urine or plasma (Ferrara, S.D., 1993). While the technology exists to detect GHB, it is seldom used. The lack of awareness about the need to look for GHB use, and the added time and expense of any GC-MS procedure in urinalysis, present significant barriers to detection of the drug.

An additional barrier to the detection of GHB comes from the short detection period afforded by the drug following ingestion. A common recreational dose is 1-3 grams. The effects of GHB tend to occur with an onset of approximately 15-30 minutes and last 2 to 3 hours. Doses larger than 3 grams are associated with amnesia, anesthesia, coma, seizures, and respiratory depression. Relatively small doses are detectable through GC-MS (Ropero-Miller and Fraser, 1997). However, the drug is extensively metabolized, and the remainder is excreted unchanged in the urine (leaving no metabolite that can be detected.) The largest amounts are excreted in urine within 2 to 4 hours after ingestion. GHB is generally not detected in urine after 12 hours, or after the first elimination of urine in the morning following ingestion of the drug. (DEA, December 1996).

Emergence of Policy Issues

A computer-based search of print media yielded several trends in media coverage of the use of a drug to facilitate rape between 1990 and 1998. Analysis of the search results show: (1) a significant rise in the number of articles, news and feature, written on the subjects of "date rape drugs" and drug-facilitated rape starting in late 1995, surging in 1996, dropping significantly in

1997 and leveling off currently; (2) demographically varied coverage, with the greatest number of articles in Florida and California; and (3) proportionally greater interest in the threat posed by flunitrazepam (brand-name Rohypnol) than in that posed by gamma hydroxybutyrate (GHB), ketamine, or alcohol. See Appendix A for a list of newspapers and magazines searched, and the terms used.

Legislative and rescheduling efforts were the most common reason for media reports, representing 45% of all articles. Rohypnol, GHB, and ketamine were often mentioned in the news as a result of specific incidents (sexual assaults, possession, seizures, etc.) and these types of articles represent 29% of the coverage. About a quarter of the news space devoted to date rape drugs provided general background about the drugs and their effects or about awareness campaigns. Table 1 indicates the numbers of each type according to primary classification.

Table 1

Articles on Drug-facilitated Rape by Major Classification

1990-1998

Type of Article	Number of Articles
Federal legislation/rescheduling efforts	105
State legislation/rescheduling efforts	82
Sex offense cases (investigation and/or prosecution in incidents of drug facilitated rape)	74
Awareness campaigns	60
Drug cases (investigation and/or prosecution in cases of possession and trafficking)	58
Newspaper profiles/editorial/columnists	41
Testimony to U.S. and Florida legislatures	17
National magazine profiles	8
Research studies	5
Unclassified	4
Total	**454**

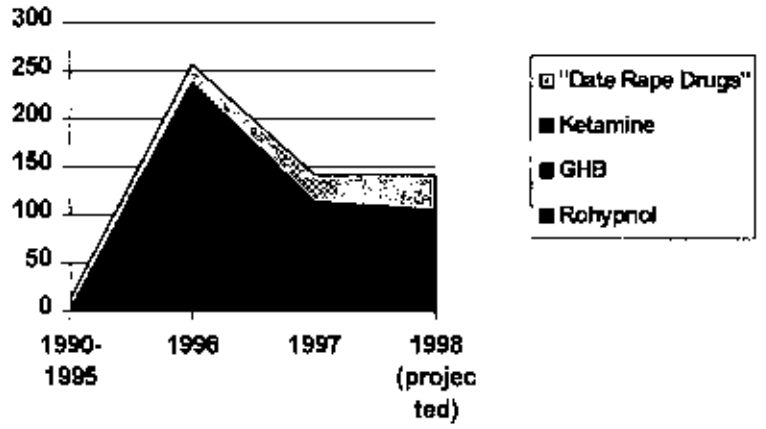
Major U.S. Newspapers and Magazines

Mention of a "date rape drug" did not appear in major U.S. newspapers prior to 1995. Between 1990 and 1994, only 14 articles were written about the intersection of date rape and any controlled or intoxicating substance, and all of these dealt with the presence of alcohol in date rape situations.

In November 1995, local newspapers in Illinois and North Dakota ran general interest stories about Rohypnol, warning readers of the new "date rape drug." In 1996, 25 major newspapers ran in-depth profiles of Rohypnol, nearly twice the number that addressed drug-facilitated rape in the five previous years combined. A total of 231 articles, including in-depth profiles, were written about Rohypnol during 1996. Seven articles were devoted to GHB. In 1997, there were 143 articles written about any and all of the date rape drugs: 66 about Rohypnol, 44 about GHB, 29 about date rape drugs in general, and 4 about ketamine. From January to April 1998, newspapers have run 41 articles about date rape drugs and drug-facilitated rape, 20 about Rohypnol, 6 about GHB, 1 about ketamine, 9 about date rape drugs in general, and 4 about the combined effects of alcohol and Rohypnol. Assuming a constant rate of reporting on this topic continues to year-end, we estimate a total of 123 stories. Figure 1 shows the increase since 1995 in media coverage of drug-facilitated rape, by type of drug mentioned.

Figure 1

Level of Media Coverage of Drug-Facilitated Rape by Type of Drug
(1990-present)



Demographic Distribution of News Coverage

News reporting on date rape drugs and drug-facilitated rape has reached a slight majority of U.S. states:

State	Number of Articles	State	Number of Articles
Alaska	8	Missouri	9
Arizona	10	Mississippi	6
California	62	North Carolina	13
Colorado	7	North Dakota	7
Dist. of Columbia	13	New Jersey	9
Florida	137	New York	12
Georgia	11	Ohio	14
Illinois	15	Oregon	8
Kansas	6	Pennsylvania	21
Kentucky	5	Rhode Island	1
Kentucky/OH paper	19	South Carolina	3
Louisiana	9	Texas	9
Massachusetts	7	U.S. general circulation	9
Maryland	2	Virginia	4
Michigan	2	Washington	6
Minnesota	9	Wisconsin	2

In most states news coverage has been limited, with the newspapers in 20 states running fewer than 10 articles relating to Rohypnol, GHB, ketamine, and sexual assault. Florida had by the greatest number of media reports; California, the state with the next greatest number (62), has fewer than half of Florida's 137 articles. Kentucky (23), Ohio (32), and Pennsylvania (21) have also been exposed to relatively substantial numbers of press reports about the issue. Coverage in Texas is not high (9 articles), which is surprising given that Texas and Florida are the states where Rohypnol seems to be most easily obtained.

Coverage by Drug

Press coverage has focused overwhelmingly on flunitrazepam. 312 of 454 or 69% of the articles since 1990 were written on Rohypnol. Of the 40 articles that serve as drug profiles, 25 described Rohypnol; 8 alcohol; 5 date rape drugs in general; 1 GHB; and 1 ketamine.

National magazines such as *Newsweek, Time, Current Health* and *Teen Magazine*, have supplied many of the profiles of date rape drugs. On the topic of GHB, *Newsweek* associates it with 20 deaths (based on DEA data); the *Journal of the American Medical Association* (JAMA) runs a Centers for Disease Control and Prevention report documenting the poisonings in New York and Texas between 1995 and 1996; and *Time* cites its increasing use in cases of date rape. *Time* (Oct 1997) is the only magazine to run a profile of ketamine, "Is Your Kid on K?"

Other Trends in News Coverage

Actual cases (given a broad definition of "case" -- i.e. including drug seizures, possession, sexual assault, overdose, whether reported as part of investigation or prosecution) fall into two main categories: drug offenses, with 58 articles; sex offenses, 74 articles.

It was not possible to use the articles to determine the number of incidents or suspects reported, the number of perpetrators, or the number of prosecutions of drug facilitated rape because many incidents/investigations/cases were discussed without specific enough information about the people involved to avoid counting a single incident as more than one.

Close to half of the news coverage came from federal and state legislative responses, U.S. Customs enforcement, and state and DEA rescheduling consideration and enactment. Two victims of flunitrazepam-facilitated rape testified in front of the U.S. House of Representatives, and the Florida Congress. Their testimonies generated 17 of the articles. In March of 1996, Customs began enforcement of the importation ban on flunitrazepam, generating 25 news reports. In October 1996, President Clinton signed the *Drug-Induced Rape Prevention and Punishment Act of 1996* (Public Law 104-305) which provided penalties for the use of any

controlled substance to aid in committing a violent crime including sexual assault. It made headlines 60 times, in almost all of the 32 states where drug-facilitated rape stories ran at all. The DEA's consideration of rescheduling flunitrazepam as a Schedule I drug also generated 20 news articles.

Awareness campaigns

Both local and national campaigns to promote awareness of date rape drugs and drug-facilitated rape have garnered much press attention. Most of 60 articles on this topic discuss government-led awareness campaigns, such as those by the FDA and the Centers for Disease Control and Prevention. Attorney General Reno's appearance at the Santa Monica Rape Treatment Center inspired 5 press reports.

Hoffmann-LaRoche, the Swiss pharmaceutical company that manufactures Rohypnol, launched an awareness campaign of its own in 1996. Hoffmann-LaRoche pledged to reformulate the pill so that it is more visible when added to a liquid (widely reported, this has not yet occurred), announced that they would halt production of the double-dose 2 mg tablet, and provided Florida police agencies with free kits to detect flunitrazepam in urine of rape victims. Hoffmann-LaRoche's campaign has been publicized in 15 stories in major newspapers.

The news media has represented drug-facilitated date rape as a growing problem with a number of legislative solutions. The chronology of the articles' subject matter suggests that the enactment of state laws and federal legislation, intended as a rapid response to a newly identified problem, has done a great deal to publicize the problem.

Measurement and Response

This section of the report analyzes steps taken to measure the magnitude of, and to respond to, drug facilitated rape.

Measuring the Problem

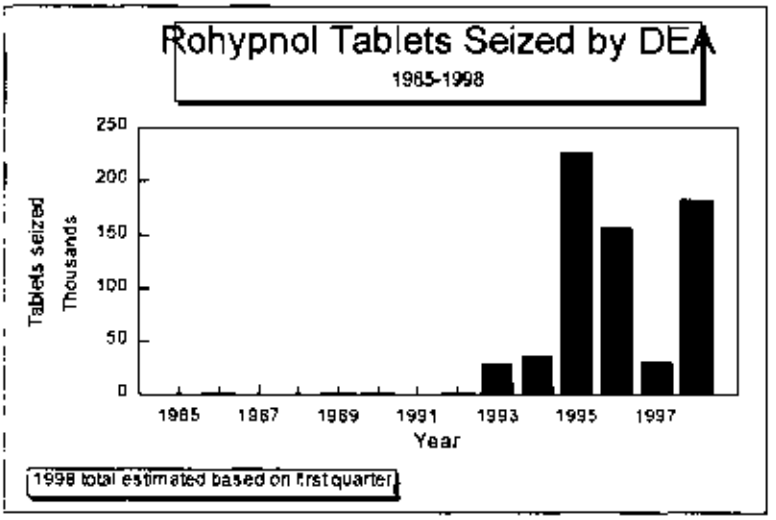
In an attempt to quantify the problem of drug-facilitated rape, we examined law enforcement data regarding interdiction of the drugs, reviewed summary level qualitative national drug use data, and assessed the few existing research studies on drugs associated with drug-facilitated rape.

Law Enforcement Data on Trafficking and Distribution

Flunitrazepam

Flunitrazepam packaged as Rohypnol is smuggled into the United States from a number of countries, but primarily from Mexico, Brazil, Columbia and Argentina. The DEA has recorded a dramatic increase in the number of Rohypnol tablets coming into the U.S. since 1993, although there was a significant drop starting in 1996 that may have been a result of increased enforcement efforts at the border. Figure 2 shows the number of tablets of Rohypnol encounters by the DEA from 1985 to 1998. Most encounters are from Customs seizures. The total for the year 1998 is projected based on first quarter encounters, and suggests that the number of tablets entering the country is currently returning to pre-1996 levels.

Rohypnol was originally produced in both 1 mg and 2 mg doses. The typical dosage used in date rape situations was the 2 mg tablet. Hoffmann-LaRoche agreed in 1996 to stop producing the 2 mg version, and to only manufacture 1 mg tablets. Until that time, DEA had seized only 2 mg tablets. After that time, there was a substantial drop in seizures of the 2 mg tablet, and a concomitant increase in seizures of 1 mg tablets, although both continue to be available. Since August 1996, counterfeit 2 mg tablets have been circulating in the U.S.



Much of the flunitrazepam on the street in the U.S. is stamped and packaged to resemble the Hoffmann-LaRoche product, but is actually counterfeit. It is not known how these counterfeit tablets are manufactured. The process is complicated and would require a high level of sophistication and access to the appropriate equipment.

GHB

GHB is produced in illicit laboratories with a relatively simple process using readily available and inexpensive materials. Information and kits containing the non-regulated precursor chemicals and "recipes" for making GHB are available from web sites on the Internet. GHB is not a controlled substance; seizures are tracked by the DEA but there is no systematic collection of data on its availability. Clues about trends in availability of the drug can be found from Drug Abuse Warning Network (DAWN) data, however, discussed below in the section on summary level qualitative national drug use.

Summary Level Qualitative National Drug Use Data

Flunitrazepam

The availability and use of flunitrazepam in the United States has been documented primarily by the DEA. Two publications provide information on trends in drug use including

information on emerging drugs: the Community Epidemiology Working Group (CEWG) reports, and an Office of National Drug Control Policy-sponsored newsletter, *Pulse Check*. Each is described below, with discussion of what information they have reported on Rohypnol possession and use. These publications focus primarily on its voluntary use rather than its use to facilitate rape.

Pulse Check

Pulse Check is published between two and three times a year by the Office of National Drug Control Policy. It is designed to provide concise, qualitative data about changes and trends in the drug scene as they develop. Data are gathered through a series of phone conversations with ethnographers, epidemiologists, law enforcement agents, and drug treatment providers.

Reports about Rohypnol first appeared in the spring of 1995 with reports that the drug was common among teens at a price of $1-$3 per tablet. In the summer of 1995, its use was said to be on the rise, and reportedly being used in conjunction with alcohol, nitrous oxide, ketamine, and opiates. In the fall of 1995 ethnographers in Texas and Florida reported that local law enforcement agents were seizing more Rohypnol tablets, often still in the manufacturer's packaging. Delaware ethnographers reported that young users advertised the popularity of Rohypnol on T-Shirts with the chemical formula for Rohypnol and ketamine on the front. In 1997, *Pulse Check* noted that although Rohypnol continued to be available in Florida and Texas, distribution had slowed since the change in legal status of the drug and pressure on the Mexican pharmacies.

CEWG

The Community Epidemiology Work Group (CEWG) is a drug abuse surveillance network funded by the National Institute on Drug Abuse and comprises researchers from major metropolitan areas in the United States. The mission of the CEWG is to provide a community level assessment of drug abuse by collecting and analyzing epidemiologic and ethnographic research data. The CEWG provides descriptive and analytical information on the nature and

patterns of drug abuse, emerging trends, consequences of drug abuse, and characteristics of vulnerable populations. Sources include public health agencies, medical and treatment facilities, criminal justice and correctional offices, law enforcement agencies, and information from surveys on drug related deaths, drug related emergency room mentions, primary substance of abuse, arrestee urinalysis results, seizure, price, prescription/distribution, and arrest data. Mention of GHB use has only recently been reported (CEWG, December 1997).

CEWG first mentioned the drug flunitrazepam in December, 1993, when it was noted that Rohypnol was associated with high school students in Miami, and that it was sometimes combined with alcohol or used after cocaine, and that was also seen among heroin users. In 1995 CEWG reported that Rohypnol use was rapidly spreading in Florida and Texas.

One of CEWG's local reporting agencies, the Texas Commission on Alcohol and Drug Abuse (TCADA), provides more extensive ethnographic information on the use of Rohypnol, reporting on activity near the U.S.-Mexican border. TCADA reports that because Rohypnol can no longer be legally imported from Mexico, Mexican vendors recommend other products, the first choice being clonazepam (Restoril--a benzodiazepine sold in the U.S. as Klonopin). Other drugs said to be replacing Rohypnol include Valium and Halcion, and bromazepam (Lexotan), a benzodiazepine neither made nor approved for use in the U.S. The reports notes that often the users cannot distinguish flunitrazepam from diazepam or clonazepam (TCADA, December 1997).

Monitoring the Future (MTF), a NIDA-funded survey of drug abuse among a nationally representative sample of secondary school students, added a question to the survey in 1997 on Rohypnol. The national estimate of use obtained is very low, and thus not reportable. Surveys of high school students in Dade County and a number of school districts across Texas, on the other hand, are bringing to light significant levels of *ever* and *past month* Rohypnol use among students. The Texas Commission on Alcohol and Drug Abuse (TCADA, 1998) conducted a survey in 101 regionally diverse school districts, in which students were asked about their use of

Rohypnol. In thirteen very small and rural districts, no students reported ever having used it. In the 88 school districts where use was reported, the mean prevalence was 3.4 percent of students. However, in a district on the Texas-Mexico border 14 percent of students report ever having used Rohypnol, and 5.3 percent have used it in the last month. In a Dade County survey of high school students, 11 percent report ever using Rohypnol, up from 6 percent the year before (conversation with Jim Hall 4/9/98).

GHB

The only national drug use data system that provides information about GHB is the Drug Abuse Warning Network (DAWN), designed to record instances of emergency room visits and deaths related to particular drugs. The DEA is actively collecting information about overdoses and deaths related to GHB and to date has documented approximately 650 overdoses, 200 law enforcement encounters, and 20 deaths.

Academic Literature on Drugs Associated with Rape

Very little has been published by researchers on the subject of drug-facilitated rape. Four articles have been published on flunitrazepam or Rohypnol, including an ethnographic study, a comprehensive review of clinical studies, and two qualitative assessments. Additionally, several ongoing studies, attempting to collect empirical data on the incidence of drug-facilitated rape but from which the results have not been published, are discussed and critiqued below. The academic literature on GHB is confined to clinical studies of its effects. No articles were found that address behavioral aspects of the abuse of GHB.

Published articles

Two published articles on flunitrazepam (Rohypnol) were funded completely or in part by Hoffmann-LaRoche. The Haight Ashbury Free Clinics received a grant from Hoffmann-LaRoche that supported an ethnographic study to investigate the nature and consequences of the abuse of Rohypnol. Information was obtained from 66 semi-structured interviews of subjects in South Texas identified as Rohypnol abusers. An important finding was that a number of tablets

marked "Roche" are being used with the mistaken impression that they are Rohypnol. These include Valium, Lexotram and Rivotril, all of which are benzodiazepines manufactured by Hoffmann-LaRoche; Valium is available in the U.S., but the other two drugs are not. Some of the tablets the respondents reported using may be counterfeit intended to look like Rohypnol. A number of respondents, male and female, reported instances of having sex under the influence of Rohypnol, but said that it was consensual. Several of the male respondents claimed to have given female acquaintances Rohypnol with and without their knowledge, with the hope of increasing their chances of having sex. Among those who had heard about specific instances of surreptitious planting of the drug in someone's drink, most said they thought it was a rare event. The researchers conclude that the focus of the attention on drug-facilitated rape would better be put on the larger issue of date rape rather than assigning blame to a particular drug (Calhoun, S.R. et al, 1996).

A second study funded by Hoffmann-LaRoche was carried out by researchers in the Departments of Pharmacology and Psychology at the University of Michigan medical school, and reported in the Journal of Clinical Psychopharmacology in a special supplement to the journal that was also funded by the pharmaceutical company.

The article is an extensive, book-length review of all available data on the potential for the abuse of flunitrazepam. Data are drawn mainly from studies conducted in European countries. Their overall conclusion is that flunitrazepam distinguishes itself among benzodiazepines primarily as the benzodiazepine of choice by opioid abusers. They suggest that this may be so due to its rapid onset of action and high efficacy (rapid onset is also a characteristic of alprozam and diazepam; but they aren't as potent as flunitrazepam). They also suggest that if this drug were removed from the European market, it would be quickly replaced by other benzodiazepines. The article does not address the question of surreptitious administration of the drug for the purpose of rape, except to note that the recent call to move flunitrazepan to Schedule I begs the question of whether it is a drug with a high potential for abuse. The authors use the World Health Organization definition of abuse liability as the capacity to produce psychologic dependence or

physiologic dependence, in conjunction with the capacity to alter behavior in a manner that is detrimental to the individual or his or her social environment.

Two articles focusing on Rohypnol and its abuse as a facilitator of rape have been published in the last year, by researchers in California and southern Florida, and are basically descriptive and speculative pieces providing the same information that has already been reported here (Saum S. and J. Inciardi; Anglin, D et al.).

Review of the ongoing research

A review of the literature revealed four studies on the prevalence of drug-facilitated rape: A Hoffmann-LaRoche-commissioned study, a Dade County Medical Examiners Office study, a University of Cincinnati study, and a Los Angeles County Medical Examiner's Office study. The studies are reviewed on methodological grounds for their scientific merit. A variety of methodological limitations and their impact on interpreting the results of these studies are outlined. After summarizing these four studies, a number of alternative research designs are suggested to study this phenomenon, and the ways in which the reviewed studies fail to provide an adequate basis from which to make informed policy decisions.

Hoffmann-LaRoche Study

Information about this study is based upon discussions with Dr. Mahmoud Elsohly, and by a review of materials from a presentation Dr. Elsohly made at the Annual Meeting of the American Academy of Forensic Sciences (AAFS) in February, 1998. This is a study funded by the pharmaceutical company Hoffmann-LaRoche Inc., the maker of Rohypnol, and has been on-going since June, 1996. A paper presented at AAFS reported on 578 cases, and noted that their plan is to collect 1,000 cases. The sample for this study comes from police departments, rape crisis centers and emergency rooms across the country. All but three states (Delaware, South Dakota, and Maine) had at least one case in their sample. However, at this time, no data are available on the percentage of cases that they received from the police, rape crisis centers or emergency rooms. The criteria for inclusion in the Hoffmann-LaRoche study sample are the

following: The case must be under investigation for sexual assault by a police department, a rape crisis center or an emergency room and the person doing the investigation must suspect that the victim consumed some type of drug (either voluntarily or involuntarily). Responsibility for the submission of cases into this study resides with the participating police departments, rape crisis centers, and emergency rooms. This urine testing service is offered free of charge by Hoffmann-LaRoche, but a staff member from one of the participating agencies must take the initiative to collect a urine specimen and send it to Hoffmann-LaRoche. There are no protocol documents or monitoring systems in place to ensure that the universe of eligible cases have a probability of inclusion into this study. Therefore, we can not be sure that Hoffmann-LaRoche's results are representative of all cases of suspected drug-facilitated rape that the participating agencies handle.

In about 97% of the cases in their sample the urine specimen was tested within 72 hours of the suspected drug-facilitated rape (86% within 48 hours). Only five of the 578 samples (just under 1%) tested positive for Rohypnol, GHB in 5% of the cases, alcohol was present in 36% of the cases, marijuana in 17% of the cases, tranquilizers in 8% of the cases, cocaine in 7% of the cases, and no traces of drugs were found in 30% or so cases. The only data available from this study are the urine test results (the victims were not interviewed for this study). No data were coded from police records for analysis (e.g., time of day of crime, location of crime, demographics of victim, etc.). Given the inadequate documentation of important elements of this study, the findings cannot be assumed to be representative of the large population.

Dade County Medical Examiners Office study

Information about this study is based upon discussions with the principal investigator (Dr. Lee Hearn, Chief Medical Examiner for Dade County) and a short report produced by the study staff. This is on-going work that started in the summer of 1996. The information made available to us is based on the one year period from the summer of 1996 to the summer of 1997 (a total of 34 cases were analyzed over this period). Dr. Hearn is in the process of assembling the results of 18 more cases. As with the Hoffmann-LaRoche study, the only data being produced

from this study are urine test results (victims are not being interviewed, nor are police records being coded for analysis). Researchers failed to collect data on the amount of time that transpired between the rape and the testing of the urine specimen (Hoffmann-LaRoche did collect this type of data). All of the cases for this study come from the Miami-Dade Police Department. The criteria for inclusion in this study are not clear, for the preliminary report for this study does not document the study design. Based upon discussions with Dr. Hearn, this study used similar intake criteria as the Hoffmann-LaRoche study. That is, the case must be under investigation for sexual assault by the Miami Dade Police Department and the person doing the investigation must suspect that the victim consumed some type of drug (either voluntarily or involuntarily). As with the Hoffmann-LaRoche study, there are no protocol documents or monitoring systems in place to ensure that the universe of eligible cases have a probability of inclusion into this study. Seven of the 34 cases (20%) tested positive for the use of flunitrazepam (Rohypnol), two cases (6%) tested positive for the use of GHB, another 11 cases (32%) tested positive for other drugs with sedative properties, and no drugs were found in the remaining 14 cases (42%).

Los Angeles County Study

Information about this study is based upon discussions with Sam Le, Supervising Criminologist of the Sheriff's Department of L.A. County. No report about this study is currently available. During the one year period from the winter of 1997 to the winter of 1998, a total of 40 cases were analyzed. As with the two studies above, the only data produced from this study were urine test results. Also, as with the Dade County study, researchers failed to collect data on the amount of time that transpired between the rape and the testing of the urine specimen. All of the cases for this study came from L.A. County Police Departments. Based upon discussions with Mr. Le, a similar intake criteria as in the above two studies was used. That is, the case must have been under investigation for sexual assault by an L.A. County Police Department and the person doing the investigation must have suspected that the victim consumed some type of drug (either voluntarily or involuntarily). Also, there were no protocols in place to ensure that the universe of eligible cases had a probability of being included in the sample. However, Mr. Le stated that there was a total of 2,000 rape cases over the study period and the

police suspected that the victim consumed some type of drug (either voluntarily or involuntarily) in 35 (under 2%) of the cases. None of the 35 sample cases tested positive for Rohypnol, but a few tested positive for other drugs (such as alcohol, cocaine, marijuana, and PCP). It should be noted that the urine specimens were not tested for GHB.

The University of Cincinnati (UC) study

This is a study funded by the National Institute of Justice (93-IJ-CX-0049). The final report for this study should be available within the next couple of months. Information about this study is based upon a preliminary data report and discussions with the Principal Investigator of the study, Dr. Bonnie Fisher. UC conducted a telephone victimization survey, in the Spring of 1994, of a representative sample of female college students attending twelve higher educational institutions. Four year colleges and universities were stratified by size of enrollment and location (urban, suburban, and rural), and then a sample of institutions were randomly selected for inclusion in this study. UC then interviewed a representative sample from these selected institutions (n=3,472 female students). This was a study of female victimization on college campuses not of drug-facilitated rape. However, the issue of Rohypnol was added as a single global question item. (Interviewers read the following: "Now, I have a few questions about your alcohol and drug consumption... How often, if ever, since school began in the Fall 1996, have you: ...Had (or suspected) someone put ROHYPNOL or a "roofie" in your beverage?"). One percent (1.1%) of all the UC study participants (victims and non-victims) answered positively to this question item. However, when one examines this question item broken down by prevalence of victimization, somewhat higher rates of Rohypnol abuse are revealed. That is, 3.5% of the victims answered positively to this question item compared to 0.08 % of the non-victims. Also, among the UC sample of self-reported rape victims about 6.5% answered positively to this question item. The main problem with the wording of this Rohypnol measure is that it does not distinguish between recreational abuse of Rohypnol and the involuntary/clandestine abuse of Rohypnol. Also, the UC study does not ask participants about other drugs used for drug-facilitated rape. The UC study is the only study of which we are aware that actually interviewed the research participants about the drug Rohypnol, but this study did not do a corresponding

urine test.

Assessment of Ongoing Studies

One point that needs to be recognized in reviewing these studies is that the nature of this phenomenon makes it very difficult to research. Specifically, it is difficult to document the occurrence of a drug-facilitated rape. First, urine testing can only show a positive result if the specimen is tested within 60 to 72 hours of the consumption of the drug. A rape victim might not show up to a facility to give a urine specimen until a number of days after the rape. Also, a positive urine test for Rohypnol alone does not prove an act of drug-facilitated rape occurred, for this person could have consumed Rohypnol recreationally before or after the assault. Therefore, a researcher would need to interview the victim to find out if they used this drug recreationally during the time in question. In some cases it would be fairly certain that a drug facilitated rape occurred; for example, where the victim tells a researcher that she/he has never used this drug recreationally, physical evidence of a rape exists, and she/he tested positive for this drug.

However, given the relatively high prevalence of recreational Rohypnol use among young college women and the relatively high probability of rape among this same group, a problem of reliable detection exists. That is, the very group who has a higher probability of being raped and a higher probability of being the victim of a drug-facilitated rape is also more likely to consume Rohypnol voluntarily/recreationally. Also, interviewing a potential drug-facilitated rape victim alone would not be sufficient. That is, the disorienting effects of this drug would make it difficult for these victims to remember if they were secretly given this drug or whether they consumed it voluntarily on another occasion independent of the rape. Therefore, a starting point for any study to document a drug-facilitated rape would be to collect both a urine specimen and interview the study participants. Additionally, the interview instrument should distinguish between recreational (voluntary) use of Rohypnol and clandestine (involuntary) use of Rohypnol. None of the four reviewed studies used both interviewing and urine testing. Therefore, we can not be certain that any of these studies have positively identified any cases of drug-facilitated rape, let alone helped establish the scale of the problem.

Responses to the Problem

This section provides an overview of steps that federal, state and local policymakers, have taken in response to reports of drug-facilitated rape, as well as the responses of the advocacy community and the manufacturer of the drug. The government response to this problem has addressed primarily Rohypnol and not GHB because GHB is not a controlled substance.

Official U.S. Response

At the federal and state level, response to the threat of flunitrazepam to facilitate rape, and acknowledgment of the potential use of drugs (flunitrazepam and GHB) in the commission of rape, has been swift.

Federal response

There have been two main actions taken at the federal level in response to concern about drug-facilitated rape. One was to enforce the ban at the U.S. Mexican border on importation of flunitrazepam, beginning in March of 1996. Secondly, in October of 1996, President Clinton signed into law the *Drug-Induced Rape Prevention and Punishment Act of 1996.* This law provides for penalties of up to 20 years in prison for the intent to commit a crime of violence (including rape) against an individual by distribution to that individual without his or her knowledge a controlled substance. It provides for penalties for trafficking of flunitrazepam equal to those for drugs under Schedule I and II of the Controlled Substances Act. It requires that the federal sentencing guidelines be reviewed and amended as appropriate. Harsher penalties are also attached to the possession of flunitrazepam--up to 3 years in prison. The legislation also calls for a study by the DEA in consultation with other federal and state agencies on the appropriateness of rescheduling flunitrazepam as a Schedule I drug. And finally, the law states that the Attorney General may create educational materials regarding the use of controlled substances in the furtherance of rapes and sexual assaults, and disseminate those materials to police departments throughout the U.S.

In 1996, the DEA asked HHS to consider the appropriateness of rescheduling flunitrazepam to

Schedule I. In January 1997, the DEA received from HHS its scientific and medical evaluation with the recommendation that the drug *not* be moved from Schedule IV. The letter stating this decision read in part:

> The Department concludes that the pre-clinical and clinical abuse liability research findings and the actual abuse of flunitrazepam does not significantly distinguish it from other benzodiazepine currently determined by the Department to have a low abuse liability and controlled in Schedule IV. Furthermore, the same science suggests that the abuse liability of flunitrazepam is significantly less than that of the Schedule II barbiturates. Thus, the abuse potential of this drug, based on the factors applied by the Department, is consistent with control under Schedule IV. However, the Department has also concluded that the drug has no accepted medical use in treatment in the United States, a finding that is consistent with control under Schedule I. Under these circumstances, the Department recommends that there be no change in the current scheduling of this drug substance under Schedule IV of the CSA.

GHB is not scheduled under federal law, and therefore its use is not affected by the *Drug-Induced Rape Prevention and Punishment Act.* However, GHB and ketamine are considered "misbranded," "adulterated," or "dangerous" drugs and manufacturers and traffickers can be prosecuted under the Federal Food, Drug and Cosmetic Act (FFDCA).

In September 1997, the DEA requested a scientific and medical evaluation of GHB from the Department of Health and Human Services (HHS), in order to schedule GHB under the Controlled Substances Act. Similarly, in April 1998 Ketamine was sent to HHS for evaluation and scheduling recommendation. HHS's recommendations on these drugs are currently pending.

States' response

Following is a summary of State laws and the degree to which drug-facilitated rape is recognized under these statutes.

Currently, Massachusetts is the only state to recognize drug-facilitated rape as a separate criminal offense distinct from its general statutes on rape. Thirty-five states and the District of Columbia have recognized the role of drugs as a mechanism for incapacitating victims by expressly including drugs as part of the definition of rape. Of these thirty-six statutes on rape, nine have incorporated the use of drugs administered *clandestinely* by the accused into the definition of rape; three have incorporated the use of drugs, the influence of which the accused has knowledge of, into the definition of rape; and four have included the administration of drugs to the victim by the accused as part of the definition of rape. Of the other nineteen state statutes recognizing the role of drugs in facilitating rape, fourteen have incorporated drugs into their definition of "mental incapacitation," which is included as part of the definition of rape in those states. The remaining five states have recognized the role of drugs in the commission of rape by including them as part of the definition of "without consent".

Currently, seven states have legislation pending that would redefine the crime of rape to include circumstances in which drugs are used for the purpose of facilitating the offense, generally by including the administration of drugs to the victim in the statutory definition of the crime of rape or in the definition of either "compulsion" or "mental incapacitation." In addition, Illinois and Oklahoma, which are among the seven states with legislation pending to include drug facilitation in the definition of rape, have bills pending in their state legislatures to enhance the prevention and awareness of drug facilitated rape. In Hawaii, there is a bill pending that would add a new section to the laws on controlled substances that would specifically prohibit acts "relating to the use of controlled substances to facilitate a crime of violence including sexual assault."

With respect to increasing penalties for drug-facilitated rape, Nevada and New Jersey are the only two states to have enacted legislation to expressly increase the penalty for rape involving the use of flunitrazepam and GHB. In addition, Arizona, Pennsylvania, and Wisconsin currently have legislation pending to increase the penalty for rape involving

the use of "rape drugs."

Flunitrazepam is a controlled drug in every state except Vermont, and seven states have included it among their Schedule I drugs. GHB is a controlled drug in eleven states, with six of the states listing it as a Schedule I drug.

International response

International concern about flunitrazepam had, until recently, been mainly confined to its use by heroin users and methadone patients. In March of 1995 the World Health Organization rescheduled the drug from a Schedule IV to a Schedule III controlled substance indicating a growing concern about flunitrazepam among the larger class of benzodiazepines. Information about actions taken concerning flunitrazepam in two foreign countries--Australia and U.K.–are provided below, but do not represent worldwide response.

A report by the Victoria, Australia, Department of Human Services compiling data on the abuse liability of flunitrazepam cites evidence that flunitrazepam causes aggressiveness and criminal activity, and is a growing problem in their prisons. The report does not address the issue of drug-facilitated rape. Possible responses put forth to deal with the problem include restrictions on availability, education/information dissemination, and changes in the tablet strength (Dobbin, M., 1997). Recently Australia reported "an outbreak" of drug-facilitated rape tied to flunitrazepam, in the resort community of Surfer's Paradise (conversation with Jane Maxwell, TCADA/International CEWG).

The United Kingdom's agency responsible for drug control recently enhanced their regulatory controls on flunitrazepam due to the movement of the drug from Schedule IV to Schedule III as part of the World Health Organization's Convention on Psychotropic Substances. Possession of the drug in the U.K. without a prescription is an offense punishable for up to two years and its importation without appropriate licenses illegal.

Recent media reports from the United Kingdom suggest that there is a growing concern over the use of flunitrazepam to facilitate rape.

Non-Official Response

Hoffmann-LaRoche

Actions taken by the makers of Rohypnol, Hoffmann-LaRoche, Inc., in response to allegations that their drug is used to facilitate rape have been mentioned throughout this report. These actions include funding of research to study the abuse liability of their drug and the habits of use among Texas border users. They have funded the development of a sensitive procedure for detection of flunitrazepam in urine, and established a program to provide free urinalysis services to women who believe they have been raped as a result of incapacitation by drugging. They have funded a public service campaign to warn individuals and rape counselors about the danger of drug-facilitated rape. They have also begun selling the drug in lower doses (1 and 2 mg tablets instead of only 2 mg tablets) hoped to be less open to abuse, and they are developing a tablet that will release a blueing agent when added to a drink.

These actions can be looked at both as an attempt by the manufacturers to keep their drug (and other drugs) from being used for sexual assault, and as an effort to protect the market viability of their product by producing information that would challenge the effort to reschedule the drug to Schedule I. Although setting up the national urinalysis program appears to have been in the interest of collecting scientifically valid data to determine the extent to which drug-facilitated rape occurs, the design of the program fails to answer that question. The company widely publicized the results with no acknowledgment of the study's limitations. The new tablet that they propose to put on the market--which releases a blueing agent--is a creative idea, but it has been decried by victim advocates, prosecutors, and law enforcement as an ineffective solution for its limitations: it takes 20 minutes to turn a drink blue and may not be visible in many types of alcohol including beer, red wine and some mixed drinks. And finally, efforts on the part of Hoffmann-

LaRoche to keep abreast of the criminal justice community's handling of cases that allege flunitrazepam-facilitated rape strike the objects of their scrutiny, such as the Broward County State's Attorney Robert Nichols, as heavy-handed and threatening.

Victim Advocacy

Rape crisis centers and other victim advocacy organizations have responded in a variety of ways to the issue of drug-facilitated rape. Some have found the Hoffmann-LaRoche awareness campaign to be useful. Others have preferred to maintain a position of independence from the manufacturer of the primary drug involved in drug-facilitated rape.

Here in the District of Columbia, the Director of the D.C. Rape Crisis Center has worked closely with Hoffmann-LaRoche on their campaign to raise awareness about drug-facilitated rape. Since 1993, two dozen or more women have come to the clinic with suspicions that they had been drugged and raped. The D.C. Rape Crisis Center Director was the primary author of the Hoffmann-LaRoche public awareness campaign materials, tailoring them to rape crisis professionals with victim-sensitive information. The D.C.-based organization RAINN (Rape, Abuse, and Incest National Network) has also worked with Hoffmann-LaRoche. The RAINN Newsletter has included information about Hoffmann-LaRoche's laboratory services and kept their 725 member rape crisis centers aware of drug-facilitated rape issues.

The Santa Monica Rape Crisis Center has launched its own awareness campaign and has been a vocal opponent of the Hoffmann-LaRoche program. A Los Angeles County-wide task force, including the Santa Monica Rape Crisis Center, law enforcement and the County Medical Examiners office, developed a rape kit and procedures for collecting urine as a standard part of rape investigations involving allegations of drug-facilitated rape. The results of the analysis of this urine has been discussed earlier in this report, as the LA County Study.

The Office for Victims of Crime (OVC) at the Office of Justice Programs, Department of Justice, is currently providing training and technical assistance to a model program designed to promote promising practices in sexual assault medical evidentiary exams. The Sexual Assault Nurse Examiner (SANE) program has developed a guide that addresses the issues of drug-facilitated rape, with specific information and guidance regarding comprehensive drug testing and an exam protocol that includes collecting and sending a urine specimen for drug testing when drugs are suspected in the sexual assault. The SANE program promotes a multi-disciplinary approach with close collaboration among a diverse array of practitioners, including law enforcement, prosecutors, medical personnel, and sexual assault victim advocates.

A non-representative group of victim advocates met as an informal focus group and offered their views on the issue of drug-facilitated rape. They reported frustration about the inability to produce evidence that there is a growing incidence of the offense. They do not have statistics to offer, but they all tell of a growing number of rape victims coming through their doors, or calling their organizations for help, saying that they believe they were drugged. "Something qualitatively different is going on out there," one of the advocates noted.

Conclusions and Recommendations

Conclusions

Currently, flunitrazepam and GHB are the two drugs most widely associated with drug-facilitated rape, although there are other drugs available that produce similar effects. The use of drugs to facilitate rape is not a new phenomenon, but the idea of there being "date rape drugs" is new. The fact that this idea has gained currency has no doubt contributed to the recent spate of cases.

Most of what is known about the abuse of flunitrazepam and GHB centers around their growing popularity with users as young as high school age, on college campuses, and in the club scene, particularly among "ravers" and gay nightclubbers. The number of cases of possession has increased each year since 1992, and ethnographers and other researchers have been providing anecdotal evidence of their use since 1993 in various parts of the country. Florida and Texas stand out as locations of Rohypnol use due to their proximity to Latin American sources, and reports on GHB abuse come from across the country. Empirical evidence of the growing use of Rohypnol by high school students, based on self-report, is just now becoming available in Florida and Texas.

These are drugs attractive to young people for getting high because they offer the same uninhibited and relaxed feeling as alcohol but can be cheaper, more convenient to use, and for some people more easily obtained. They also fit into a culture of all night dance clubs that grows increasingly popular. GHB is easily manufactured as a "home brew," while the supply of Rohypnol coming over the border from Mexico may have been stemmed temporarily but is on the rise. The fact that flunitrazepam and GHB are being used by people at an age when they are most likely to engage in risky, and criminal, behavior, along with the drugs' reputation for producing amnesia and the ease with which they can be obtained, appears to have set the stage for their use in the commission of rape.

To date, in over 700 instances where a rape victim believed that she had been drugged, urine was collected and sent to a central laboratory for analysis by Hoffmann-LaRoche, makers of Rohypnol. Analysis of the first 578 specimens found 5 that were positive for presence of Rohypnol (fewer than 1%) and 30 positive for GHB (5%). Other drugs detected through the urinalysis include prescription sedatives such as Valium in 8% of the specimens, marijuana in 17% of the specimens, cocaine in 7% and alcohol in 36% In around 30% of the specimens, no drugs were found. It cannot be known whether the sedatives detected in the specimens were taken voluntarily or involuntarily.

The question remains why so many of the victims believe that they were drugged. Were they given drugs not included in the urinalysis or that the urinalysis was not sensitive enough to detect? Were the specimens collected later than the laboratory reported, and therefore the evidence was eliminated from the victims' urine at time of collection? Was GHB, a drug with an extremely short detection period (similar to alcohol), the drug used in cases where no positives were found? Was the rape facilitated by the use of alcohol alone, perhaps in quantities large enough to produce amnesia? What were the criteria used by police, rape crisis and emergency room personnel to decide to send the specimens for analysis? No conclusions can be drawn from this study or the other studies reported here.

A larger question remains of how many cases there have been where a sexual assault was facilitated through drugs but no rape was reported either because the victim was completely unaware of or confused about the circumstances. Evidence points to a rate of occurrence that is relatively small. But the availability of these drugs and others brought over the Mexican border to become a commodity among young drug users appears to be on the rise; suggesting that the problem is not going to go away.

Recommendations

The lack of replicable studies begs for continued research in this area, but there are a

number of policy initiatives that can be begun even without knowing the exact extent of the problem of drug-facilitated rape. This section outlines some immediate policy actions that can be taken regardless of the outcome of future research, followed by a possible research agenda.

Policy Recommendations

As a general rule, practices and strategies which reduce sexual assault will reduce drug-facilitated sexual assault. The recommendations that follow are in the areas of sexual assault prevention and education, investigation and prosecution practices, and training for professionals. Ideally, steps taken with respect to drug-facilitated rape would *augment* efforts already being undertaken. Where there is a lack of attention to these issues, drug-facilitated rape could serve to highlight the need for attention or as an illustration of the "worst case scenario." The need to educate young women on how to reduce their risk of sexual assault, the severe underreporting of sexual assault, the lack of a coordinated, victim-sensitive response to complaints are the overriding issues within which drug-facilitated rape could reside.

Design educational programs for community outreach

Most rapes are not reported to the criminal justice system. Victims often go elsewhere for assistance. A broad-based educational program could be designed to reach out to potential victims, from girls in high schools, to college students and those who frequent resorts or nightclubs. Educational materials could be disseminated to provide objective prevention messages as well as information on what to do in the event of victimization.

Develop guidelines for practitioners

There have been only a handful of successful prosecutions of drug-facilitated rape to date nationwide. As a result, the criminal justice system does not yet have a standard

operating procedure for handling these cases. Most police departments do not train officers to look for symptoms that a rape victim may have been drugged. In fact, one officer mentioned that after a clear case of drug-facilitated rape, old files were reviewed and a number seemed to indicate similar symptoms that had gone unnoticed. Practitioners, from police investigators to nurse examiners to forensic lab staff to prosecutors could be provided with guidelines on what symptoms to look for and the proper handling of evidence in drug-facilitated rape cases. The Department could fund the development of a set of guidelines or "best practices" for handling these cases.

Train professionals based on guidelines

Based on the guidelines that are developed, practitioners would greatly benefit from hands-on training on proper techniques for recognizing the signs of possible drugging, proper handling of evidence, and other important investigative, evidentiary and prosecutorial standards. The Department could facilitate the development of the training curricula and share it with the national organizations best able to provide the direct training such as the national police, forensic and prosecutorial organizations. Training would be based on the guidelines mentioned above. A critical component would be the methods to detect cases where victims were not even aware that they were assaulted or that an assault was drug-facilitated.

Research Recommendations

A review of the existing research on drug-facilitated rape reveals a lack of reliable information. The few studies that have been done are inconsistent in their methodologies and cannot be compared against each other for validity. We acknowledge the difficulty in measuring the extent of a problem so susceptible to under-reporting and have identified possible research methods to address that challenge.

There are three main components of our recommendations -- expansion of existing data collection systems, collection of new data, and development of advanced drug detection

and measurement methods. Each area is explained in greater detail below.

1. Expand existing federal data systems to provide information on drug-facilitated rape

There is information currently being collected and reported on offenses committed, arrests made, and cases prosecuted, that may be useful in monitoring the extent of the problem of drug-facilitated rape. Careful consideration would have to be made to determine if modification of these systems would be appropriate and warranted for drug-facilitated rape, where the scope of the problem is unknown. There is the *National Incident-Based Reporting System (NIBRS)* on offenses and arrests, and the periodically conducted *National Judicial Reporting Program* (NJRP) -- that could monitor the prevalence of this crime. The *Survey of Inmates of Local Jails*, the *Survey of Prisoners*, and the *Surveys of Adults on Probation and Parole* could seek self-report data on these offenses, although these criminal populations may not be where the offenders in these cases are most likely found. A supplement to these surveys would be costly, and likely yield little information on drug-facilitated rape. The most suitable federal data system to bring to bear on this problem is the *National Criminal Victimization Survey*. This population-based survey could be supplemented with questions about known and suspected cases of drug facilitation.

2. Collect new data

There are a number of areas in which new data could be collected to shed light on the extent of the problem of drug-facilitated rape, including information on the pharmacological impact of the interaction of the drugs with alcohol; a series of case studies to identify the typical offender profile; and, lastly, a research initiative designed to address the problems found in current efforts to collect urine and self-report data that would determine the incidence of this problem.

Pharmacology Studies

Since many date rape drugs are administered to a victim by adding them to an alcoholic drink, it is important to examine the interaction of these drugs with alcohol. No existing studies document the impact of alcohol consumption on the effects of these drugs, and the effects and possible lethality could be multiplied by the interaction. We recommend that scientific study of this issue be requested of the National Institute on Drug Abuse.

Offender profiling

Anecdotal evidence suggests that a number of those guilty of drug-facilitated rape have had multiple victims. Some have photographed or videotaped the crime. This suggests a particular pathology that could be further examined through a case study approach to document the typical offender or the most risky situations. The FBI's Behavioral Sciences Unit would be the appropriate office to conduct such work.

Major research initiative on drug-facilitated rape

A series of studies could be developed to address the limitations of the existing research that has been conducted to date specifically on the incidence of drug-facilitated rape. The four reviewed studies are inadequate but provide a point of departure from which to consider the appropriate sources and methods. The three urine-test studies produced results that included only a small fraction of reported rape cases (i.e., rape cases in which the person doing the investigation must have suspected that the victim consumed some type of drug, either voluntarily or involuntarily). None of the studies sampled cases in such a manner that the universe of reported rape cases at any level (e.g., for the whole country, a particular state, or a particular city) had a probability of selection.

This research initiative could be composed of four parts, as described below. Taken together, these studies would comprise a major, multi-year effort. Each part stands alone, however, and would serve to provide information from an important aspect of

drug-facilitated rape.

A. Measure the incidence of drug-facilitated rape among suspected cases

A study, somewhat similar to one of the three urine-test studies reviewed in this report, could be designed in which a representative sample of all reported rape cases was assembled. Such a study would need to include interviews with victims, an examination of police records and drug testing results (where appropriate). The research could focus on Florida, Texas, and California to maximize the relevance of the information developed. This study would be an improvement over the three urine-test studies by standardizing selection criteria, and would address the question of assessing the percentage of *reported rape cases* which are drug-facilitated.

B. Measure the incidence of drug-facilitated rape in the population

To understand the prevalence of drug-facilitated rape a broader representative community sample is desirable. The best type of community sample would be one representative of all people in the United States. That is, we would probably like to be able to generalize our results to all the citizens of the United States, not just people who live in certain states and in certain urban places. However, whether the researcher limited their representative community sampling strategy to certain states or certain cities it is very expensive sampling strategy. Thousands of people would have to be interviewed to find a sufficient number of drug-facilitated rape cases to analyze.

C. Measure the incidence of drug-facilitated rape among high risk populations

Another sampling strategy which could tap into this group of non-reporting rape victims is a multi-strategy sampling scheme. With this alternative scheme, in addition to sampling from police departments, rape clinics, and emergency rooms, the researcher would sample cases from multiple high risk and hard to reach sources: College campuses, resort and club areas, Texas border towns, as well inner-city housing projects, and clinics. This multi-sampling scheme would provide some of the benefits of the

broader representative community sampling approach. First, with this alternative strategy, data would be obtained from rape victims who don't report to the police. Second, data from a demographically similar group of non-victims would also be collected (which would permit the testing of a risk factor model).

D. Study drug-facilitated rape in the context of acquaintance rape

The issue of drug-facilitated rape needs to be understood in the framework of general risk factors for sexual assault. A number of strong risk factors for sexual assault have emerged in the literature (e.g., a person's lifestyle/routine activities seems to be a good predictor of rape), and the relative risks associated with drug-facilitated rape need to be examined controlling for these more general risk factors. To understand the risk factors for rape, researchers would need to collect data from a group of rape victims and a matched group of non-rape victims. The process of finding a matched comparison group of non-rape victims could be difficult. A representative community sampling methodology would be the best strategy to produce a matched comparison group. Another strategy would be to advertise (in a variety of sources) for people with similar demographic profiles as the rape victims.

3. New measurement and technology development

Lastly, one of the difficulties of measuring the extent of the problem of drug-facilitated rape is that the drugs metabolize quickly. As a result, unless urine is collected from the victim immediately after the event, it is extremely difficult to document the presence of drugs in her system. NIJ is currently considering funding of technology development in the area of dosage detection. In particular, we recommend examining the possible use of hair testing to determine if a date rape drug was administered within a window of the past 6 months. This would significantly improve the ability of prosecutors to develop cases where there was not an immediate urine test.

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1997 and leveling off currently; (2) demographically varied coverage, with the greatest number of articles in Florida and California; and (3) proportionally greater interest in the threat posed by flunitrazepam (brand-name Rohypnol) than in that posed by gamma hydroxybutyrate (GHB), ketamine, or alcohol. See Appendix A for a list of newspapers and magazines searched, and the terms used.

Legislative and rescheduling efforts were the most common reason for media reports, representing 45% of all articles. Rohypnol, GHB, and ketamine were often mentioned in the news as a result of specific incidents (sexual assaults, possession, seizures, etc.) and these types of articles represent 29% of the coverage. About a quarter of the news space devoted to date rape drugs provided general background about the drugs and their effects or about awareness campaigns. Table 1 indicates the numbers of each type according to primary classification.

Table 1

Articles on Drug-facilitated Rape by Major Classification

1990-1998

Type of Article	Number of Articles
Federal legislation/rescheduling efforts	105
State legislation/rescheduling efforts	82
Sex offense cases (investigation and/or prosecution in incidents of drug facilitated rape)	74
Awareness campaigns	60
Drug cases (investigation and/or prosecution in cases of possession and trafficking)	58
Newspaper profiles/editorial/columnists	41
Testimony to U.S. and Florida legislatures	17
National magazine profiles	8
Research studies	5
Unclassified	4
Total	**454**

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Appendix A - Media Search Terms

(c) 1998 The Wichita Eagle
File 724:(Minneapolis)Star Tribune_1989-1996/Feb 04
(c) 1996 Star Tribune
File 725:(Cleveland)Plain Dealer_Aug 1991-1998/Apr 06
(c) 1998 The Plain Dealer
File 730:Nashville Banner_1996- 1998/Feb 20
(c) 1998 Nashville Banner
File 731:Philad.Dly.News_1983- 1998/Apr 06
(c) 1998 Philadelphia Newspapers Inc
File 732:San Francisco Exam._1990- 1998/Apr 06
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File 733:The Buffalo News_1990- 1998/Apr 05
(c) 1998 Buffalo News
File 734:Dayton Daily News_Oct 1990- 1998/Apr 04
(c) 1998 Dayton Daily News
File 735:St. Petersburg Times_1989- 1998/Apr 05
(c) 1998 St. Petersburg Times
File 736:Seattle Post-Int._1990-1998/Apr 06
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File 737:Anchorage Daily News_1989-1998/Apr 06
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File 738:(Allentown) The Morning Call_1990-1998/Apr 05
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File 739:The Fresno Bee_1990-1998/Apr 04
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File 741:(Norfolk)Led./Pil._1990-1998/Apr 04
(c) 1998 Virg.-Pilot/Led.-Star
File 742:(Madison)Cap.Tim/Wi.St.J_1990-1998/Apr 06
(c) 1998 Wisconsin St. Jrnl
File 743:(New Jersey)The Record_1989-1998/Apr 03
(c) 1998 Record (The)
File 744:Biloxi Sun Herald_1995-1998/Mar 13
(c) 1998 Biloxi Sun Herald
File 747:Newport News Daily Press_1994-1998/Apr 05
(c) 1998 The Daily Press

Sets selected:

Set	Items	Description
1	318637	DATE/TI,DE,LP
2	10726	ACQUAINTANCE/TI,DE,LP
3	126335	RAPE/TI,DE,LP
4	79	BENZODIAZEPINES/TI,DE,LP

5 9 FLUNITRAZEPAM/TI,DE,LP
6 70 KETAMINE/TI,DE,LP
7 423 ROHYPNOL/TI,DE,LP
8 221 ROOFIES/TI,DE,LP
9 224 GHB/TI,DE,LP
10 4390 GAMMA/TI,DE,LP
11 238 HYDROXY/TI,DE,LP
12 69 BUTYRATE/TI,DE,LP
13 42 GAMMA/TI,DE,LP(W)HYDROXY/TI,DE,LP(W)BUTYRATE/TI,DE,LP
14 248 (DATE OR ACQUAINTANCE)(W)RAPE (10N) (BENZODIAZEPINES OR FLUNITRAZEPAM OR KETAMINE OR ROHYPNOL OR ROOFIES OR GHB OR GAMMA(W)HYDROXY(W)BUTYRATE)/TI,DE,LP
15 318637 DATE/TI,DE,LP
16 126335 RAPE/TI,DE,LP
17 737149 DRUG?/TI,DE,LP
18 380 DATE/TI,DE,LP(W)RAPE/TI,DE,LP(W)DRUG?/TI,DE,LP
19 441 S14 OR (DATE(W)RAPE(W)DRUG?)/TI,DE,LP
20 318637 DATE/TI,DE,LP
21 10726 ACQUAINTANCE/TI,DE,LP
22 126335 RAPE/TI,DE,LP
23 182454 ALCOHOL/TI,DE,LP
24 737149 DRUG?/TI,DE,LP
25 490 (DATE OR ACQUAINTANCE)(W)RAPE (10N) (ALCOHOL OR DRUG?)/TI,DE,LP
26 92 S25 NOT S19
27 441 S19

Prints requested : ('*' indicates user print cancellation)

07apr 15:46:07 P052: PR 19/5/1-441 ADDR ADJUDY (VIA EMAIL)

DC Record - 1

CS DIALOG(R)File 146:Washington Post Online

4127623
Police Seek Teen Charged In Date-Rape Drug Case
The Washington Post, May 28, 1997, FINAL Edition
By: Leef Smith, Washington Post Staff Writer
p. V03
Story Type: News Virginia
Line Count: 35 Word Count: 393

From: EDD Master Account <Dialog@eds.dialog.com>
To: OJP4.PO5(ORCYBR1)
Date: 4/7/98 4:50pm
Subject: P052: PR 19/5/1-441 ADDR ADJUDY

File(s) searched:

File 146:Washington Post Online_1983-1998/Apr 06
(c) 1998 Washington Post
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(c) 1998 Phoenix Newspapers
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(c) 1998 St Louis Post-Dispatch
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(c) 1995 Houston Post
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(c) 1998 Chronicle Publ. Co.
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(c) 1998 Scripps Howard Newspapers

File 642:The Charlotte Observer_1988-1998/Apr 05
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(c) 1998 The Wichita Eagle
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(c) 1996 Star Tribune
File 725:(Cleveland)Plain Dealer_Aug 1991-1998/Apr 06
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File 733:The Buffalo News_1990- 1998/Apr 05
(c) 1998 Buffalo News
File 734:Dayton Daily News_Oct 1990- 1998/Apr 04
(c) 1998 Dayton Daily News
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(c) 1998 St. Petersburg Times
File 736:Seattle Post-Int._1990-1998/Apr 06
(c) 1998 Seattle Post-Intelligencer
File 737:Anchorage Daily News_1989-1998/Apr 06
(c) 1998 Anchorage Daily News
File 738:(Allentown) The Morning Call_1990-1998/Apr 05
(c) 1998 Morning Call
File 739:The Fresno Bee_1990-1998/Apr 04
(c) 1998 The Fresno Bee
File 740:(Memphis)Comm.Appeal_1990-1998/Apr 05
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Set	Items	Description
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2	10726	ACQUAINTANCE/TI,DE,LP
3	126335	RAPE/TI,DE,LP
4	79	BENZODIAZEPINES/TI,DE,LP

From: EDD Master Account <Dialog@eds.dialog.com>
To: OJP4.PO5(ORCYBR1)
Date: 4/7/98 4:50pm
Subject: P053: PR 26/5/1-92 ADDR ADJUDY

File(s) searched:

File 146:Washington Post Online_1983-1998/Apr 06
(c) 1998 Washington Post
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  Sets selected:

  Set      Items   Description
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    2      10726   ACQUAINTANCE/TI,DE,LP
    3     126335   RAPE/TI,DE,LP
    4         79   BENZODIAZEPINES/TI,DE,LP
    5          9   FLUNITRAZEPAM/TI,DE,LP
    6         70   KETAMINE/TI,DE,LP
    7        423   ROHYPNOL/TI,DE,LP
    8        221   ROOFIES/TI,DE,LP
    9        224   GHB/TI,DE,LP
   10       4390   GAMMA/TI,DE,LP
   11        238   HYDROXY/TI,DE,LP
   12         69   BUTYRATE/TI,DE,LP
   13         42   GAMMA/TI,DE,LP(W)HYDROXY/TI,DE,LP(W)BUTYRATE/TI,DE,LP
   14        248   (DATE OR ACQUAINTANCE)(W)RAPE (10N) (BENZODIAZEPINES OR
                   FLUNITRAZEPAM OR KETAMINE OR ROHYPNOL OR ROOFIES OR GHB
                   OR GAMMA(W)HYDROXY(W)BUTYRATE)/TI,DE,LP
   15     318637   DATE/TI,DE,LP
   16     126335   RAPE/TI,DE,LP
   17     737149   DRUG?/TI,DE,LP
   18        380   DATE/TI,DE,LP(W)RAPE/TI,DE,LP(W)DRUG?/TI,DE,LP
   19        441   S14 OR (DATE(W)RAPE(W)DRUG?)/TI,DE,LP
   20     318637   DATE/TI,DE,LP
   21      10726   ACQUAINTANCE/TI,DE,LP
   22     126335   RAPE/TI,DE,LP
   23     182454   ALCOHOL/TI,DE,LP
   24     737149   DRUG?/TI,DE,LP
   25        490   (DATE OR ACQUAINTANCE)(W)RAPE (10N) (ALCOHOL OR
                   DRUG?)/TI,DE,LP
   26         92   S25 NOT S19

  Prints requested :  ('*' indicates user print cancellation)
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From: EDD Master Account <Dialog@eds.dialog.com>
To: OJP4.PO5(ORCYBR1)
Date: 4/7/98 4:50pm
Subject: P052: PR 19/5/1-441 ADDR ADJUDY

File(s) searched:

File 146:Washington Post Online_1983-1998/Apr 06
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