ALASKA LEGISLATURE COMMITTEE FILES 1987-1988 8672
4588 HHES SB 32 (FILE 2)

Table 6

COMPARISONS OF LIFETIME EXPERIENCE WITH PSYCHOACTIVE DRUGS BY HIGH SCHOOL SENIORS

Drug	Percent Trying			
	Alaskan Seniors (N = 345)	1982* National Seniors (N = 17,500)	1983* National Seniors (N = 16,300)	1984* National Seniors (N = 15,900)
Marijuana	70**	58	57	54.9
Hallucinogens	15	13	12	10.7
Cocaine	37	16	16	16.1
Heroin	1	1	1	1.3
Inhalants	17	13	14	14.4
Stimulants	41	36	36	27.9
Depressants	18	12.8	13.6	13.3
Tranquilizers	15	14	13	12.4

*Source: John ... (2), National Institute on Drug Abuse.
**Figures are rounded to nearest whole number.

The comparisons show that the rates for experience with drugs among Alaskans aged 12-17 exceeded the rates obtained in the national sample for every substance. The magnitude of the differences range from a low of 2:1 to a high of 3:1. It is apparent that drug-taking behavior occurred at a higher rate among Alaskan youth than among those reported in the national survey, but because of differences in sampling procedures and time of sampling, these differences should be interpreted as a relative comparison rather than exact differences. Nevertheless, the question that arises is: Why are the differences so extensive? One answer may lie in the sampling procedure; youth may be less reluctant to report drug use in a questionnaire than in a personal interview. Another possible explanation is that drug use in Alaska is actually higher. The latter explanation tends to be supported when a comparison is made between high school seniors in Alaska and seniors in Johnston et al's (2) national study. Representative findings from these more comparable surveys are presented in Table 6. Except for heroin, drug experience rates for Alaskan seniors exceed the rates obtained in the national senior sample.

CONCLUSIONS

The results of this study indicate a pattern of drug-taking behavior that is consistent among adolescents across the state. Furthermore, prevalence levels for lifetime experiences in Alaska, despite limitations in comparing the Alaskan data with national household data, are higher than the prevalence rates reported in the national survey, and in the national survey of high school seniors. Another possible limitation to the study is the fact that it is not known whether the respondents who reported taking a drug actually took the "real thing" as opposed to a "look-alike" or substitute substance, except for marijuana.

While this problem is common to all forms of survey research, it need not detract from the basic findings. What is important to consider is that the respondents, regardless of whether they may have taken real or substitute drugs, reported that they were involved in some form of drug-taking behavior, and it is *their* account of their behavior in which we are interested. Additionally, the issue of the reliability and validity of self-reports concerning drug-taking behaviors always comes into question, but sufficient research has been conducted on this problem to conclude that self-reports are generally reliable and valid and tend to be free from systematic bias.

The major question that arises is: Why are the prevalence rates so high in Alaska? Part of the answer seems to be that drugs are readily available, and that many young people are actively interested in seeking these drugs. Furthermore, mood-altering drugs may have become incorporated into the "Alaskan life-style." In this context, experimental or recreational drug-taking behavior is viewed primarily as a social phenomenon and not as deviant behavior. In Alaska this life-style pattern takes on a special quality. Perhaps many who try or use drugs recreationally perceive their drug-taking behavior as part of a life-style that represents a breaking away from the traditional estab-

lishment—one that emphasizes a desire to develop free from conformity and a need to seek new, different, stimulating or exciting experience (5). Such behavior appears to be consistent with the "last frontier" individualistic, risk-taking behaviors practiced by many people in the state. Adolescents may tend to emulate these motives.

An important implication of this finding is that of determining more precisely how attitudes, life-style or value systems espoused within the larger context of society exert an influence on e younger members of that society. For many of them, experimentation with drugs may not only serve to satisfy curiosity, but also may be a means of obtaining new and exciting experiences. While these motives may also prevail among "lower-48" youth (8), Alaska's unique environment tends to heighten their reinforcement. While all drug-taking behavior cannot be accounted for by these reasons, research (5) has shown a strong relationship between these motives and such behavior.

The findings from the present study have significant implications concerning the prevention of drug-taking behavior. Different prevention goals may need to be devised for various points in the prevalence curves pertaining to first experiences with drugs. Since recent research (4, 9) has suggested that there may be critical periods for substance use initiation, there is every reason to underscore the importance of understanding these early use patterns as the first step in the design and implementation of primary prevention programs. The most logical strategy is to focus prevention efforts at the ages at which initiation into drug-taking behavior occurs. Prior to these ages prevention efforts should be directed at delaying or preventing the onset of non-medicinal use of mood-altering drugs; subsequent to these critical periods efforts should concentrate on the reduction of prevalence.

An important element of any prevention program should be a basic assumption that drug experimentation or limited recreational drug use may not necessarily represent deviant or pathological behavior. Rather, such behavior may have become a social norm, and youth in our society may be reflecting a form of behavior that has become acceptable among large segments of our society, even though it is illegal and poses a health risk. Prevention programs based on this premise should have a better chance at succeeding than programs that do not take this phenomenon into consideration. Prevention specialists, therefore, are faced with the task of developing a strategy that comes into effect after a drug has been tried—one that focuses on reducing use after initiation to or experimentation with mood-altering drugs has occurred.

In summary, it is evident that the lifetime prevalence rates for drug use were remarkably high in Alaska. It is also apparent that there is a need for a greater understanding of the factors that contribute to Alaska's high level of drug-taking behavior. The understanding of these factors should be applicable not only to Alaska but also to other areas of the country experiencing a rise in drug use among youth.

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DRUG ABUSE AND DRUG ABUSE RESEARCH

The FIRST in a SERIES of
TRIENNIAL REPORTS to CONGRESS

from the SECRETARY,
DEPARTMENT of HEALTH and
HUMAN SERVICES

DRUG ABUSE AND
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DEPARTMENT OF HEALTH AND HUMAN SERVICES
Public Health Service
Alcohol, Drug Abuse, and Mental Health Adminstration

National Institute on Drug Abuse
5600 Fishers Lane
Rockville, Maryland 20857

JANUARY 1984

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Introduction and Extent and Consequences of Drug Abuse: Dr. Richard Clayton, University of Kentucky

Prevention Research: Dr. Gilbert J. Botvin, Cornell University Medical College

Treatment Research: Dr. Charles O'Brien, University of Pennsylvania

Marijuana and Cannabinoids: Dr. Sidney Cohen, University of California at Los Angeles

Tobacco: Dr. Thomas A. Burling, Johns Hopkins Medical School

Cocaine and Stimulants: Dr. Reese Jones, University of California at San Francisco

Sedative and Anti-Anxiety Agents: Dr. Leo Hollister, Veterans Administration Hospital, Palo Alto, California

Hallucinogens and Inhalants: Dr. Edward Domino, University of Michigan Medical School

Heroin and Narcotics: Dr. William Martin, University of Kentucky

Basic Research and Endorphins and Enkephalins: Dr. Floyd E. Bloom, The Salk Institute

We also wish to acknowledge the important contributions of two staff members at the National Institute on Drug Abuse's Addiction Research Center: Dr. Charles Gorodetsky and Dr. Jack Henningfield.

Whenever specific questions of scientific judgment arose in the preparation of this report, we deferred to the expertise of the researchers contributing to individual chapters.

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INTRODUCTION

The problem of drug use and abuse in the United States is pervasive. In fact, it is widely thought that the levels of use and abuse of drugs in our society are equal to or higher than those found in any other industrialized country. The drug abuse problem is also exceedingly diverse. Virtually every community in every State has, at one time or another, felt its impact, some more acutely than others. Drug abuse rates vary from community to community and, within communities, the rates often vary considerably from neighborhood to neighborhood. While there are some differences in the degree to which drugs are abused by sex, race-ethnicity, social class, and other personal and psychological characteristics, no segment of the population is immune to the problem. Further, the drug abuse problem spreads and changes with remarkable speed. For example, the phencyclidine (PCP) epidemic of the 1970s arose almost overnight and, just when research on this drug began to make some strides, the problem decreased dramatically.

Stated simply the problem of drug abuse in the United States is an extremely complex and almost constantly changing phenomenon. The more we learn about the problem, the more cognizant we are of the impact drug abuse has on individual lives, on the functioning of families and communities, and on the health and well-being of the entire society.

THE RESEARCH PROGRAM AT NIDA

The Federal agency responsible for monitoring drug abuse trends and sponsoring research on this complex problem is the National Institute on Drug Abuse (NIDA). It was established in September of 1972 and given statutory authority in 1973. Thus, NIDA has been in existence for less than a decade. For most of this time, it has operated under an extremely broad mandate that included providing direct financial assistance for drug abuse education, training, treatment, and rehabilitation, as well as funding and

conducting intra- and extramural research. However, since the advent of the Alcohol and Drug Abuse and Mental Health Services Block Grant program in fiscal year 1982, NIDA no longer provides direct financial assistance to treatment and prevention programs although it does conduct research in these important subject areas.

The Epidemiological Research Program provides the Institute with an understanding of the incidence of, prevalence of, and trends in drug abuse for the general population as well as for specific subgroups within the population. It is organized around several statistical reporting systems that monitor changes in some of the consequences of drug abuse, e.g., medical emergencies, drug overdose deaths, admissions to treatment, and it regularly surveys the correlates, causes, and consequences of drug abuse in various segments of the population (i.e., households, high school seniors, etc.).

Prevention and treatment research are not seen as totally separate entities. Rather, they are thought to exist on a continuum of prevention. The Prevention Research Program includes the design, delivery, and evaluation of different school, peer, family, media, and community-based strategies. The primary purpose of these studies is to learn the most effective means to teach young people how to choose healthy alternatives to drug use. Much of the research in the area of primary prevention involves learning how young people make decisions and learning how to influence that decision-making process. The Treatment Research Program at NIDA is focused on those persons who are already heavily involved in drug abuse and who are suffering the consequences of that involvement. Treatment research seeks to design and evaluate the best mixture of treatment strategies for persons with differing kinds of drug abuse problems, the ultimate goal being prevention of further drug abuse and its attendant consequences. The fourth and final segment of the research program at NIDA is Drug Specific Research. This type of research is usually "basic" in nature because the bulk of it deals with the chemical and pharmacological properties of specific drugs and their effects on organisms.

About half of NIDA's program consists of basic research, seeking to develop new knowledge about the mechanism of action of drugs; their sites of action, especially in the brain and central nervous system; and their pharmacology. Recent advances in receptor research under sponsorship of NIDA grants have done much to advance the field of basic knowledge about how drugs act in the body and how their effects are produced.

Other drug-specific research focuses on the hazards of various drugs, and ranges from the adverse biological effects of drugs on body systems to psychobehavioral effects, including effects on learning, performance, and cognition, and to social effects, such as crime. Chemical research focuses on the development of new compounds, prediction of drug action from structure-activity relationships, determination of metabolic pathways of drugs, and the development of assay methods of detecting drugs in body fluids.

SIGNIFICANT RESEARCH CONTRIBUTIONS

In somewhat less than 10 years NIDA has established a strong program of research in the four categories. Significant contributions have been made in each area. A host of longitudinal studies, i.e., studies of the same people at different points in time, have provided a much clearer understanding of the factors influencing the initiation, continuation, progression, and cessation of drug use. The Institute has sponsored tightly controlled and comprehensive studies of various prevention strategies delivered in schools, e.g., drug education courses, teacher training, decisionmaking courses. There are clear differences in how effective these strategies are in changing student attitudes about drugs and their use of drugs. An extensive series of studies has begun to reveal which types of treatment are most effective for particular types of individuals with serious drug problems. Over the past several years, NIDA-sponsored research into the chemistry and metabolism of various drugs, i.e., the ways in which the drug is broken down and chemically transformed in the body, has shed new light on the role played by endorphins, the body's own pain-fighting substance. This line of research has relevance for all of medicine. NIDA has also played a key role in the development and testing of new and more effective treatment agents, most notably LAAM, naltrexone, and buprenorphine, all of which have unique properties that contribute to better treatment for opiate addicts. Research on the dependence liability and addictive potential of tobacco has led to a new understanding and appreciation of why people who smoke cigarettes have such a difficult time quitting.

ORGANIZATION OF THE FIRST TRIENNIAL REPORT

This first triennial report to the U.S. Congress is organized to reflect the four foci of NIDA's research program. Following this introduction, Chapter 2 includes a review of some of the latest findings on the extent of drug abuse in

deaths, vehicular accidents attributed to drug use, the impact of drug abuse in the workplace, the relationship between drug abuse and crime, and the impact of early drug use on subsequent use of other drugs. Included in Chapter 3 are a review of what is known about the factors that promote drug use relative to adolescent development and the effectiveness of various educational and psychosocial approaches to preventing drug use and abuse among adolescents. Chapter 4 focuses on the relative effectiveness of different treatment approaches, including detoxification, methadone maintenance, residential, outpatient drug free, and other treatment modalities. Chapters 5 through 10 will deal with specific drug classes and what is known from basic research about their mechanisms of action and the health hazards associated with use and abuse of these drugs. The final chapter summarizes the emergent knowledge about a new class of drugs, endogenous opioids such as endorphins and enkephalins, and recent research about drug receptors in the central nervous system. This line of research has great potential not only for the field of drug abuse but also for neurology, mental health, cardiology, and alleviating pain.

It would not be possible in a short report to review everything that has been done in each of these research areas. The purpose of this first triennial report is to provide an overview of some of the more important recent research on drug abuse and on the health and other consequences attributable to drug abuse.

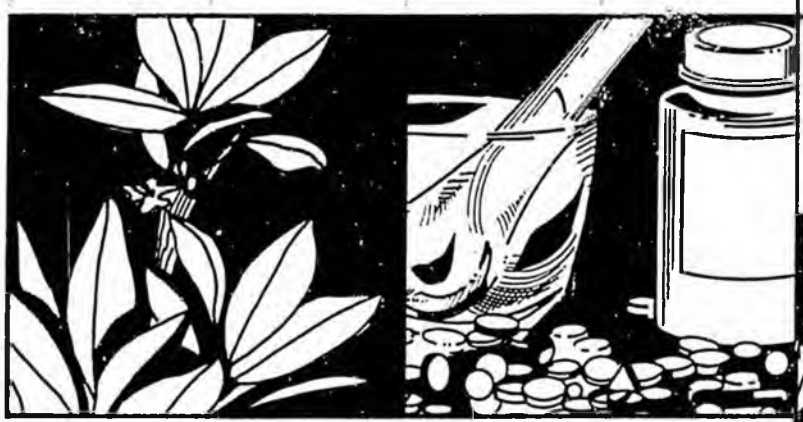
EXECUTIVE SUMMARY

Section 2(b)(7) of Public Law 98-24, the Alcohol and Drug Abuse Amendments of 1983, require the Secretary of Health and Human Services to submit to the Congress a report summarizing the health consequences and extent of drug abuse. Also included in this report are current research findings, such as the health effects of marijuana and the addictive property of tobacco. In an effort to provide the most current information available, the National Institute on Drug Abuse (NIDA) drew upon experts from the field in each of the various areas covered to prepare the material used in the report.

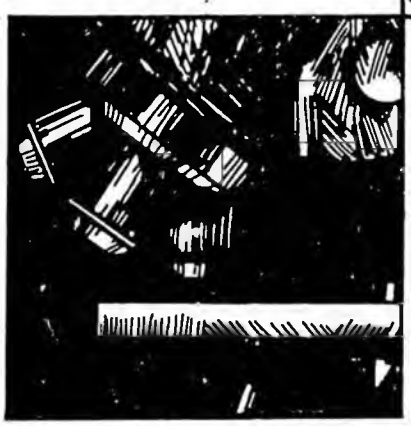
Recent epidemiological data provide evidence that, as a general trend, the extent of drug use in the Nation has stabilized or is decreasing. Nonetheless, illicit drug use in the United States remains at a level probably exceeding any nation in the western industrialized world. Drug abuse clearly is a major public health problem, demanding continuing priority attention and concern. Twenty years ago less than 2 percent of the Nation's young people had tried an illicit drug. Today about two-thirds have tried an illicit drug before they graduate from high school. In 1960 less than 7 percent of college-age young adults had tried marijuana; by 1982, 64 percent reported some use of the drug. There has been a 400 percent increase in heroin use since 1960. The adverse cost to society, particularly of drug-related crime and corruption, also remains unacceptably high. Studies have shown the total annual cost of drug abuse to society to be close to $100 billion. Of this figure, approximately $10 to $16 billion is conservatively attributable to the impact of drug abusers on the health care system, the law enforcement system, the employment market, and the general welfare and social services. Another $70 to $80 billion in annual costs result from the costs of criminal drug trafficking.

Niilo Koponen

DRUG ABUSE AND DRUG ABUSE RESEARCH



THE SECOND TRIENNIAL REPORT TO CONGRESS FROM THE SECRETARY, DEPARTMENT OF HEALTH AND HUMAN SERVICES



DRUG ABUSE AND

DRUG ABUSE RESEARCH

The Second Triennial Report to Congress
from the Secretary, Department of
Health and Human Services

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
Public Health Service
Alcohol, Drug Abuse, and Mental Health Administration

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Their contributions to the following chapters of the report are gratefully acknowledged:

The Nature and Extent of Drug Abuse
Dr. Richard R. Clayton, University of Kentucky

Prevention Research
Dr. Gilbert J. Botvin, Cornell University Medical College

Treatment Research
Dr. Charles P. O'Brien, University of Pennsylvania

Marijuana and the Cannabinoids
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Cocaine
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Sedatives and Anti-Anxiety Agents
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Hallucinogens and Inhalants
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Heroin and Narcotics
Dr. William Martin, University of Kentucky

Basic Research on Endogenous Opioids
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Acquired Immunodeficiency Syndrome (AIDS)
Dr. Robert C. Petersen, Psychologist, Consultant

Additional assistance in reviewing the material contained in this report was provided by members of the staff of the National Institute on Drug Abuse and by:

Dr. Robert L. Balster, Virginia Commonwealth University

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Dr. J. David Hawkins, University of Washington

Dr. Leo E. Hollister, VA Medical Center, Palo Alto, California

Dr. Lloyd D. Johnston, University of Michigan

Dr. Harold Kalant, University of Toronto

Dr. Herbert D. Kleber, Yale University School of Medicine

Dr. Mary Jeanne Kreek, Rockefeller University, New York

Dr. Ro Nemeth-Coslett, Addiction Research Center,
National Institute on Drug Abuse

Dr. Solomon H. Snyder, Johns Hopkins University School of Medicine

The contributions of those named and of the larger scientific community is gratefully acknowledged.

Mrs. Sally Breul and Mrs. Mary Louise Embrey, at NIDA, had overall responsibility for preparation of the report, and Dr. Robert C. Petersen served as technical editor.

Contents

Introduction

Drug abuse (with the exception of alcohol abuse) became uncommon following the passage of the Harrison Narcotic Act of 1914. However, during the past twenty years it has emerged as a dominant public health and social concern. In 1960 less than 7 percent of college-age young adults had ever used marijuana; by 1982, a majority (64 percent) of young adults 18-25, nearly two out of three, had done so. Cocaine use for most of this century was restricted to a tiny minority of the population. But by 1985, more than one in six (17.3 percent) high school seniors had tried cocaine; nearly a third of our young adults (18-25) had done so.

With burgeoning abuse has come an equally dramatic increase in the human and economic costs associated with this unparalleled rise in illicit drug consumption. The estimated total annual cost to American society through decreased economic productivity, unemployment, increased health and social welfare costs, law enforcement, and associated costs of criminal trafficking in drugs has been estimated to be nearly $100 billion. This does not begin to take into account the moral erosion that results when large numbers of our citizens consume illicit drugs -- and support an extensive criminal enterprise both here and abroad by doing so.

If the picture is frightening, there are some signs that it is becoming a little less so. As more and more of us have become aware of the implications for all of us of illicit drug use, drug abuse has been increasingly "deglamorized." It is no longer being portrayed in the mass media as the "in" thing it was described as only a few years ago. The tragic deaths of some of our most talented young people have sobered us. There are signs of a shift in public opinion -- and an increasing intolerance of the high human costs Americans pay for getting high. A few years ago -- in 1978 -- only a third of our high school seniors felt that regular use of marijuana posed "great risk." By 1985, seven out of ten seniors had come to that conclusion. But the number who still dismiss the risks of illicit drug taking by their continuing use remains unacceptably high.

This Second Triennial Report on Drug Abuse and Drug Abuse Research summarizes the changes that have occurred in our understanding of the health implications of drug abuse as a result of research since 1983. The Department is hopeful the report will contribute to an increasing resolve on all our parts to once again make illicit drug abuse the rarity it once was in American society.

5-0131L
Chenoweth
5/4/88

Original sponsors: Fischer, Faiks,
Binkley, et al.

IN THE SENATE

HOUSE CS FOR CS FOR SENATE BILL NO. 32 ( )

IN THE LEGISLATURE OF THE STATE OF ALASKA

FIFTEENTH LEGISLATURE - SECOND SESSION

A BILL

For an Act entitled: "An Act relating to marijuana; and providing for an effective date."

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF ALASKA:

* Section 1. FINDINGS. (a) The legislature finds that marijuana use is a serious health problem for the following reasons, each of which constitutes a legitimate and compelling state interest:

(1) marijuana and other cannabis preparations contain

(A) more than 420 different compounds, including 60 cannabinoids that have mind-altering properties;

(B) tetrahydrocannabinol (THC), one of the pharmacologically active compounds in marijuana, a substance

(i) that is fat and lipid soluble;

(ii) that is attracted to the lipid tissues of the body, including the brain, testicles, ovaries, liver, kidneys, heart, and bone marrow;

(iii) that has increased in strength and potency from less than one percent 10 years ago to as high or higher than 10 percent in marijuana obtainable today; and

(iv) whose metabolites can take longer than 30 days to be eliminated from the body;

(2) medical and laboratory research have yielded findings that demonstrate that marijuana has a detrimental effect on

(A) respiratory and cardiovascular systems, in that

(i) sinusitis, pharyngitis, bronchitis, and emphysema

are associated with chronic marijuana use;

(ii) evidence suggests that habitual marijuana smoking may be a factor in the development of bronchogenic carcinoma;

(iii) during a marijuana "high," the user may experience tachycardia as the heart rate increases to as much as 130 - 150 beats a minute;

(B) reproductive systems, in that

(i) marijuana affects the network of glands and hormones that are involved in reproduction;

(ii) a pregnant woman who uses marijuana takes an increased risk that the chemical compounds in the marijuana will pass across the placenta to the developing fetus;

(C) the brain, in that

(i) THC accumulates in brain cell membranes;

(ii) neurons, the most specialized and complex cells in the body, are affected more than any other cells by substances that alter or block cell membranes;

(iii) use of marijuana impairs visual tracking and depth perception and a reduction in coordination, reaction time, and vigilence, making it dangerous to drive, fly, or operate machinery;

(iv) chronic marijuana use may cause irreversible changes of the brain, interfere with reading comprehension, verbal and mathematical problem solving, perception of time and distance, short term memory, and the ability to concentrate, and reduce motivation;

(v) the psychological effects of marijuana use may include anxiety, panic, paranoia, psychosis, illusions, and hallucinations, and recent studies link marijuana to

schizophrenia;

(D) the body's immune system, in that marijuana use

(i) depresses the immune system and alters the fundamental cellular defenses against disease; and

(ii) reduces the chromosomes in T-lymphocyte cells, as evidenced by a 1973 study of the immune system conducted at Columbia University by Dr. Morishima; the study, validated by other researchers, conducted on 51 men who smoked two marijuana cigarettes per week for four years, demonstrated that of the 92 chromosomes normally present in T-lymphocyte cells, there was a reduction of up to one-half;

(3) the use of marijuana has a social effect that is detrimental to the public health and welfare:

(A) the legislature has received 70 resolutions, from student organizations, school boards, municipal governing bodies, law enforcement organizations, health and social services organizations, citizen drug task forces, and civil organizations, asking for a tightening of the laws governing possession of marijuana;

(B) the Criminal Justice Planning Agency's 1981 report, "Crime in Alaska," states that juvenile arrests had increased by 19 percent from the previous year, noting that possession of marijuana accounted for over 85 percent of all juvenile arrests;

(C) surveys conducted by Dr. Bernard Segal in 1981 and 1982 indicated that 47.4 percent of Alaska's youth between 12 and 17 reported having used marijuana, compared to the reported national average for use among people in that age group of 26.7 percent;

(D) despite the fact that possession of marijuana by young people is a crime, its use is common:

(i) in a 1987 follow-up survey conducted by the

Fairbanks North Star Borough School District, 47.8 percent of the students in grades 7 - 12 reported having used marijuana, an increase from the 40.1 percent who reported having used marijuana in 1982;

(ii) in a 1987 follow-up survey conducted by the Juneau School District, 69.4 percent of the students in grades 7 - 12 reported having used marijuana, compared to 68.7 percent who reported having used marijuana in 1982; the Juneau School District survey suggests that marijuana continued to be the controlled substance most commonly used, and gave evidence of a downward trend as to the age of initiation of young people into use of the substance.

(b) The legislature further finds that

(1) the federal Drug Enforcement Agency has classified marijuana and other cannibis preparations in that agency's schedule I due to the high potential for abuse and addiction;

(2) the Undersecretary for International Narcotic Affairs of the United States Department of State, in an Anchorage address, stated, "Several foreign countries have questioned the sincerity of the United States regarding suppression of illicit drugs by calling attention to Alaska's legislation of small amounts of marijuana. This is significant because the United States is a signatory nation to two international conventions concerning control of narcotics--the Single Convention of Narcotic Drugs of 1961 and the Psychotropic Substance Act of 1971--that include outlawing of marijuana";

(3) the Drug Report submitted to the Alaska Legislature by the Alaska State Troopers for the period January 1, 1986 - June 30, 1987, describes a marijuana eradication program that led to the seizure of 3,600 marijuana plants with an estimated value of more than $866,000.

* Sec. 2. AS 11.71.060(a) is amended to read:

(a) Except as authorized in AS 17.30, a person commits the crime of misconduct involving a controlled substance in the sixth degree if the person

(1) [USES OR DISPLAYS ANY AMOUNT OF A SCHEDULE VIA CONTROLLED SUBSTANCE OR] possesses, uses, or displays one or more preparations, compounds, mixtures, or substances of an aggregate weight of one ounce or more containing a schedule VIA controlled substance [ON A PUBLIC STREET OR SIDEWALK OR ON THE PREMISES OF A PUBLIC CARRIER OR BUSINESS ESTABLISHMENT OR IN ANY OTHER PUBLIC PLACE];

(2) knowingly possesses any amount of a schedule VIA controlled substance within the immediate control of that person while operating a propelled vehicle;

(3) being under 19 years of age, possesses one or more preparations, compounds, mixtures, or substances of an aggregate weight of less than four ounces containing a schedule VIA controlled substance; or

(4) [POSSESSES ONE OR MORE PREPARATIONS, COMPOUNDS, MIXTURES, OR SUBSTANCES OF AN AGGREGATE WEIGHT OF FOUR OUNCES OR MORE CONTAINING A SCHEDULE VIA CONTROLLED SUBSTANCE; OR

(5)] refuses entry into a premises for an inspection authorized under AS 17.30.

* Sec. 3. AS 11.71.070(a) is amended to read:

(a) Except as authorized in AS 17.30, a person commits the offense of misconduct involving a controlled substance in the seventh degree if the person

(1) manufactures or delivers, or possesses with the intent to manufacture or deliver, one or more preparations, compounds, mix-

tures, or substances of an aggregate weight of less than one- half ounce of a schedule VIA controlled substance; or

(2) possesses, uses, or displays one or more preparations, compounds, mixtures, or substances of an aggregate weight of less than one ounce containing a schedule VIA controlled substance [ON A PUBLIC STREET OR SIDEWALK OR ON THE PREMISES OF A PUBLIC CARRIER OR BUSINESS ESTABLISHMENT OR IN ANY OTHER PUBLIC PLACE].

* Sec. 4. This Act takes effect immediately under AS 01.10.070(c).

DEPARTMENT OF THE TREASURY
U.S. CUSTOMS SERVICE
ANCHORAGE ALASKA

April 15, 1988

REFER TO

Chairman
State of Alaska
House of Representatives
Health, Education and Social Services Committee
P.O. Box V
Juneau, Alaska 99811

Dear Chairman:

I thank you for allowing me to testify in the Alaska State Legislative hearings on the Recriminalization of Marijuana on April 13, 1988.

Enclosed is information you requested on drug seizure statistics at points of entry into Alaska. These statistics are for the eight month period from July 1987 through March 1988, which is prior to our new seizure guidelines. Note that these seizures took place predominantly during the very slow fall and winter months. Under our new guidelines, these figures will increase substantially.

July 1987 through March 1988:

165 marijuana seizures
8 cocaine seizures
5 other narcotic seizures
178 total narcotic seizures

143 vehicles seized (value $1,624,465)

62 persons arrested

During the month of April 1988 to date:

17 narcotic seizures

15 vehicles seized

2 vessels seized

13 arrests

These figures are for the first 15 days of April.

If you need further information, please call me at 271-4043.

Sincerely,

C. Duane Oveson
District Director

3211 Providence Drive
Anchorage, Alaska 99508

COLLEGE OF NURSING
AND HEALTH SCIENCES

APR 2

April 22, 1988

Representative Niilo Koponen, Co-Chair
House HESS Committee
Pouch V
Juneau, Alaska 99811

Representative Johnny Ellis
Co-Chair
House HESS Committee
Pouch V
Juneau, Alaska 99811

Dear Representatives Koponen and Ellis:

Thank you for your confidence in the Center for Alcohol and Addiction Studies to provide information on CSSB 32 (HESS). As with the legislature in its closing days, I am also caught up in meeting my end of term obligations, but this is an important enough issue for me to take time to attempt to address some of the concerns expressed in your letter. Given the short-time frame, however, I cannot undertake a comprehensive review to document the arguments for or against the specifications in the Bill. What I can do is provide a frame of reference from which the committee could address the issues and concerns currently being raised, and then attempt to provide a summary of the latest finding pertaining to marijuana.

The frame of reference that I am referring to above involves presenting a brief historical review of efforts to deal with marijuana in the United States. I think this review is necessary because it should provide a perspective to understand the current struggle faced by the Committee. This review is derived from a chapter in a book I wrote, "Drugs and Behavior: Cause, Effects, and Prevention," soon to be published by Gardner Press (New York). I have purposely highlighted specific words or phrases.

I trust that this review, presented in the attached document, will be of help.

Sincerely,

Bernard Segal

Bernard Segal, Ph.D.
Director, Center for Alcohol and Addiction Studies

BS/mh
attach:

Jim

Statement on Marijuana in Reference to CSSB 32 (HESS) to the
House of Representatives
Committee on Health , Education and Social Services
BY
Bernard Segal, Ph.D.
Director, Center for Alcohol and Addiction Studies
University of Alaska Anchorage
April, 1988

A Brief Contemporary History of marijuana in The united States

Just prior to the end of prohibition, congressional interest in marijuana increased as a result of public pressure. In response to this pressure, Congress passed legislation (in 1929) that classified marijuana as a narcotic drug. The Surgeon General in the same year issued a document, Preliminary Report on Indian Hemp and Peyote, that contained a **scathing** indictment of marijuana, describing it as "definitely a narcotic" and giving credence to popular notions that it was **addictive, criminogenic, and insanity producing**. This proclamation gave fuel to those participating in various prohibitionist movements; all who shared in an antihedonistic ethic united to prohibit legally all pleasure-producing chemicals, as well as various pleasurable nonchemical pastimes such as dancing, jazz music, and gambling Marijuana was seen, with increasing ferocity, as evil and as physically, emotionally, and morally devastating to the individual, and unquestionably destructive to the culture. Users had to be protected from themselves even if they saw no danger in their habit (White, 1979).

The Federal Bureau of Narcotics (FBN), which was a unit in the Treasury Department formed to enforce the federal antiopiate and anticocaine laws, was established in 1930 under the direction of Harry J. Anslinger. The unit was not given any enforcement or legal powers over marijuana, but this did not stop Anslinger from pursuing legislation to ban what he perceived as a "lethal weed." One of his first acts was to foster the preparation of a Uniform State Narcotic Act, designed for adoption by state legislatures. Although accepted by many states, the act failed to include a ban on marijuana, but it did provide an opportunity for states to limit trafficking in marijuana.

Between 1930 and 1937, there was a continuous focus on marijuana as a particularly **evil drug**, but its control was left up to the states, of which only 16, by the early 1930s, had enacted laws prohibiting it. In 1936 an especially derogative and misleading report entitled Marijuana or Indian Hemp and Its Preparations was published by the International Narcotic Education Association in conjunction with the FBN. It provided the following description of

marijuana's effects (Rublowsky, 1974):

> Prolonged use of marijuana frequently develops a delirious rage which . . . sometimes leads to high crimes such as assault and murder. Hence marijuana has been called the "killer drug." The habitual use of this narcotic poison always causes a very marked deterioration and sometimes produces insanity. Hence marijuana is frequently called "loco weed". . . . Marijuana often gives man the lust to kill unreasonably without motive. Many cases of assault, rape, robbery, and murder are traced to the use of marijuana. (p. 107)

This report, together with other allegations that **marijuana causes murders, suicides, robberies, criminal assault, etc., especially among the young**, was the basis upon which Anslinger launched his efforts to establish a federal marijuana law. His efforts were rewarded by Congress's enactment of the Marijuana Tax Act of 1937. Although this bill did not actually prohibit marijuana, it stipulated that all manufacturers, importers, dealers, and practitioners register and pay a special tax, and established a tax on all transfers. Only the nonmedical, untaxed possession or sale of marijuana was banned. Following passage of the tax act, FBN agents began to arrest marijuana users who previously had been either ignored or turned over to state authorities, but the bureau's major focus continued to be on heroin. Interest in prosecuting marijuana users gradually declined, and the FBN's concern with marijuana arrests remained secondary to its prosecution of heroin offenders.

Nevertheless, **the dangers of marijuana continued to be portrayed.** In an effort to determine the true hazards of marijuana use, which was very prominent in New York City, Mayor LaGuardia empowered a special committee to study the matter. Its report, issued in 1944 and known as the "LaGuardia Report," concluded that **"the publicity concerning the catastrophic effects of marijuana smoking in New York City is unfounded . . . [and that] marijuana was a minor nuisance rather than a major menace"** (cited in Griffenhagen, 1972, p. 1). These conclusions, however, were attacked by all circles, including the American Medical Association (AMA). The onslaughts were so pervasive that Mayor LaGuardia was put on the defensive and had to assure the AMA and the public that he would enforce the laws against marijuana. The issues and problems concerning marijuana, however, did not end there. After remaining somewhat dormant for the next 15 years, compared with prior years, concern about marijuana and other drugs suddenly leapt once more into America's consciousness.

Based on the above history, it would appear that the battle has started all over again in Alaska. What is important to realize from the above discussion is that **none** of the allegations made against marijuana were ever substantiated by scientific evidence. The arguments were governed more by emotion than reason or fact.

With respect to the scientific evidence about marijuana, let me present the following factual information and allow conclusions to be derived from it. The sources on which statements are based are cited in the narrative.

Psychopharmacological Aspects of Marijuana (and Hashish)

Of all the natural hallucinogens, marijuana (for which there are hundreds of different names all over the world) has the longest history. Although it may be questionable as to whether marijuana should be classified as a hallucinogen, a sedative-hypnotic, or in a class by itself, it is most often referred to as a hallucinogenic agent because it has come to be used primarily for its ability to induce intoxicating or euphoric effects.

The history of cannabis products and their use, particularly in the United States, has been well documented. Briefly the earliest use of cannabis has been traced to 2737 B.C. in China, where it was noted in the pharmacological literature of the time. It was introduced into India about 800 B.C., and continues to be known there as Bhang or Charas. It subsequently found its way into Arabic countries, where it was used extensively both medicinally and socially. Eventually the use of cannabis spread to Europe and then to the Americas. Recent interest in the medical use of marijuana has emerged in the United States (c.f. Blum, 1984), but such use remains highly restricted. Illicit social/recreational use, however, is fairly widespread, particularly among the younger members of our population. The most frequent means of using marijuana is by smoking it as cigarettes in which the dried, shredded leaves are rolled into a "joint." Hashish is typically consumed through a pipe, and marijuana can also be smoked in this manner. Both marijuana and hashish can also be eaten ("magic brownies") or made into a tea; each is seldom injected.

The name "marijuana" itself actually refers to the dried and chopped-up leaves, flowers, stem, and seeds of the hemp plant, of which there are two varieties - Cannabis indica, which represents the East Indian hemp plant, and Cannabis sativa, the American hemp plant. There are both male and female plants, and until fairly recently it was thought that only the female plant produced the active ingredients. Research, however, has shown that both plants produce active products, but the female plant yields a higher concentration. The term "hashish," which has sometimes been mistakenly used as a synonym for marijuana, represents the dried caked resin produced from the

tops and leaves of the female cannabis plant, and is more potent than marijuana.

Over 400 closely related chemicals have been isolated from the cannabis plant. These are collectively called cannabinoids, of which THC (delta-9-tetrahydrocannabinol) is believed to be the primary psychoactive or mind-altering compound. Although pure THC is alleged to be sold on the streets, it is almost never available in pure form and substitutes are provided, which often turn out to be PCP (Hollister, 1984). The fact that the chemical structure of cannabinoids does not contain a nitrogen atom distinguishes them from other naturally occurring hallucinatory compounds, and keeps them from being classified as alkaloids. The climate in which the plant grows, and the type of plant, together with other factors, determine the strength of the marijuana. Today's marijuana is ten tirnes more potent than that used in the early 1970s. As the potency of the plant increases, there is a corresponding increase in its psychopharmacological effects.

In 1976 the average potency of marijuana seized and tested by the DEA, was one percent delta-9-THC. By 1977 that potency was just over 1.5 percent, and averaged only a 2 percent increase over the next six years. By 1982, the potency climbed to 3.6 percent, and by 1984 it had risen to 4 percent. In early 1985 the potency was found to be 5.5 percent (Korcok, 1985). The ability to grow higher potency cannabis has resulted in a sophisticated marijuana market that, in addition to requiring higher potency, also looks for special kinds of effects; many of the cannabis plants now grown are not only simply being pushed to achieve higher potency, but also to deliver specific effects (Korcok, 1985).

Much of today's marijuana comes from Mexico, Latin and South America, and the West Indies, but preference has now turned to more potent home-grown products. Maui Wowi, for example, has been a particularly popular variety of marijuana that is (illegally) grown in Hawaii and is considered to be exceptionally strong. More recently marijuana has become a profitable illicit cash crop in the mainland United States, where a very potent form is grown. Called sensimilla, it is gaining popularity because it is supposed to be extremely pure and capable of inducing a sustained high. Sensimilla's potency ranges from 6 to 7 percent, depending on where it is grown. "There is the increasing sophistication of the U.S. customer learning about sensimilla, being able to recognize 7% from 4% marijuana, demanding it, and paying for it" (cited in Korcok, 1985). Sensimilla growth in the United States, as a result of this demand, has been estimated to have doubled between 1979 and 1983 (Brecher, 1986).

Psychological Effects

Marijuana's effects are related to its quality or potency and to the user's set and setting. The nature of marijuana intoxication varies dramatically from one individual to another, and can range from very pleasant to highly unpleasant. In general its effects, when smoked, begin within five to ten minutes, and within an hour when eaten; they may last for two to four hours when inhaled and up to 24 hours when ingested.

A positive experience, based on a good quality of marijuana (currently averaging about 5 percent THC), may consist of a sense of well-being, a dreamy state of relaxation and euphoria, alterations in thought formations, a more vivid sense of touch and perceptions, and distorted concepts of time and space. Symptoms fairly commonly (but not always) associated with marijuana use are reddening of the eyes, dryness of the mouth, hunger, a mild rise in heart rate, and reduction of pressure in the ocular fluid of the eyes. A bad trip, experienced mostly by new users, tends to involve symptoms that resemble an anxiety attack, such as a feelings of panic, intense anxiety, and restlessness. Extremely high doses of marijuana may result in a toxic psychosis that may last up to a day. Hallucinations, illusions, paranoid delusions, feelings of depersonalization, and confusion may take place, and at times it may be difficult to determine whether such symptoms are an idiosyncratic reaction or a result of an overdose (Cohen, 1981). Flashback experiences have been known to occur with the use of marijuana (Cohen, 1981), and, as with most other psychoactive drugs, it has also been found to impair intellectual and psychomotor functioning and short-term memory (Blum, 1984). A unique characteristic of marijuana is that it remains in the body for a long period of time because cannabinoids are eliminated at a very slow rate; traces of the drug can be found in the body up to 50 hours or longer after its use.

Tolerance, Dependence, and Physical Effects

Whether the effects of marijuana are subject to tolerance and physical dependence is an issue that remains open to interpretation. Some strongly contend that tolerance develops, and that the onset is quite rapid (Nahas, 1979); others indicate that "tolerance and withdrawal symptoms with marijuana do not develop" (Cohen, 1981). Blum (1984) states, "Carefully conducted studies with known doses of marijuana or THC leave little question that tolerance develops with prolonged use" (p. 495). He goes on to note that:

> The novice has a moderate degree of tolerance. With increasing exposure, tolerance appears to decrease, so that the occasional user has a low degree of tolerance and can smoke less to get the desired results. With increasingly heavy use, it rises again so a

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> The novice has a moderate degree of tolerance. With increasing exposure, tolerance appears to decrease, so that the occasional user has a low degree of tolerance and can smoke less to get the desired results. With increasingly heavy use, it rises again so a

> high degree of tolerance is developed and the user can smoke ten or more joints daily and get only mildly high. Withdrawal of the drug, especially in the chronic user, may evoke a psychic response in that the individual feels the need for the drug and will seek it or some substitute. The anxiety, restlessness, insomnia, and other nonspecific symptoms of withdrawal are similar to those experienced by compulsive cigarette smokers. (p. 495)

The issue of whether one can develop tolerance to marijuana has not been completely resolved and studies continue. What is currently believed is that under conditions of heavy, sustained use, tolerance is manifested, but there is uncertainty about whether tolerance develops under conditions of low use.

There is also controversy over whether marijuana causes physical damage to the body, especially with long-term or chronic use. The research evidence suggests that some claims are substantiated, while others are in need of more research. **There is general agreement, however, that marijuana intoxication interferes with overall mental functioning, driving, psychomotor functioning, and learning.** "The effect on learning is pertinent, since much marijuana use occurs during schools hours. The psychomotor deficits can last up to 4 to 10 hours after smoking, well beyond the duration of the 'high'" (Cohen, 1985, p. 62).

Another substantiated effect is on the respiratory system. Marijuana tars contain 50 percent more carcinogens than high-tar tobacco cigarettes, with 70 percent more benzopyrne in marijuana than in tobacco smoke (WHO, 1981). Using marijuana thus increases the risk of bronchial problems, such as sore throats, coughing, and susceptibility to bronchitis and pneumonia. The marijuana smoker is also subject to the risk of lung cancer and other disorders to which cigarette smokers are exposed, but the risk is higher because the smoke inhaled is unfiltered and has five to ten times the cancer-causing agents found in cigarettes. Marijuana and tobacco users run a risk of lung cancer than is higher for use of either substance alone.

Other adverse physical effects that have been **attributed** to the use of marijuana are specific damage to the endocrine, immunity, and reproductive systems; organic brain damage; and chromosome abnormalities. Research also suggests that marijuana may adversely impact the reproductive system of both males and females (Blum, 1984; Nahas, 1979). Frequent use of marijuana has been linked to a decrease in levels of serum testosterone, but it appears that the testosterone level may return to normal after smoking stops. There have been no reports, however, of abnormal offspring associated with marijuana use by the father (Blum, 1984). In females the use of marijuana is

believed to affect the menstrual cycle, interfering with ovulation and lowering the period of fertility (Blum, 1984). In addition, since THC passes through the placental barrier, the **possibility** of damage to the developing fetus is always at risk. Marijuana use during pregnancy should be avoided. Moreover, if marijuana does adversely affect hormones related to sexual development as some believe (Nahas, 1979), its use **may be** especially harmful during adolescence, a period of rapid physical and sexual development.

Research investigating whether marijuana causes chromosome abnormalities, endocrine disorders, and organic brain damage is being conducted, but results thus far have been **inconclusive**. There has also been a question of whether marijuana adversely impacts the immunity system, but research results have been contradictory (Cohen, 1985) and the question has not been resolved. Recent concern, however, has been expressed that there may be a link between early marijuana use and an increased link to the risk of AIDS (McConnell, 1986). It has been pointed out by Dr. Ian Macdonald (cited in McConnell, 1986), administrator of the U.S. Alcohol, Drug Abuse and Mental Health Administration, that marijuana may depress the immune system, and "that about 26% of AIDS patients in the US are intravenous (IV) drug users whose first drug experience was with marijuana" (p. 1). Dr. Macdonald commented further that:

> Experiments with mice and guinea pigs . . . show the herpes virus given to animals also given tetrahydrocannabinol (THC) grew faster and produced more changes in interferon - a natural immune resistor - and in lymphocyte functions than in control animals given only the virus without THC. . . . The increase in both AIDS and herpes in the US match the massive upswing in drug use. We know that almost all drugs have an effect on the immune system. At the moment we just don't have as good a handle on it as we'd like. . . . The immune link is not so easy to prove. (pp. 1, 2)

It should be noted that any unsubstantiated claim that marijuana (or other drugs) causes physical damage (e.g., chromosome damage, impairment of the immunological system) may be counterproductive because such claims make marijuana users (and users of other drugs) skeptical about <u>any</u> negative statements about drugs, even if such reports are accurate and supported by preliminary research findings.

One effect that has been reported to be associated with chronic marijuana use is the "amotivational syndrome." The phrase was used by McGlothlin and

West (1968) and Smith (1968) to describe a condition associated with regular marijuana use by youths in which the individual adopts an attitude and behavior that are asocial, nondirectional, and a "cop-out" on established values. The amotivational syndrome is characterized by apathy, a loss of effectiveness, a diminished capacity to carry out complex, long-term plans, an inability to endure frustration and to concentrate for long periods, and an inability to follow routines or to master new material successfully.

There has been considerable controversy over whether the amotivational syndrome exists, and the debate continues. Cohen (1981) best summarized the issues concerning the amotivational syndrome as follows:

> What must be remembered is that large amounts of cannabis have a depressant effect upon the central nervous system, and equivalent amounts of alcohol or sedatives also would produce a decreased desire to work, poor performance, and a blunted emotional response. One difference is that THC is retained in the brain . . . for long periods because of its aqueous insolubility.
>
> Some young people do become sedated from considerable cannabis consumption. Others may become amotivated from discouragement about their situation, and marijuana ingestion simply reinforces their dropout from active participation in life. (pp. 37-38)

Legal Aspects of Marijuana

Although marijuana is a Schedule I drug under the federal Controlled Substance Act, several states have decriminalized marijuana and introduced minimal penalties for its possession when its use remains within the confines of the state's regulations. Under federal law, however, marijuana trafficking offenses are subject to the same penalties as those imposed for narcotics - 15 years' imprisonment, a $25,000 fine, or both, for a first offense.

Review of CSSB 32

Based on the above discussion, and on my experience, I will try to address the specific allegations in CSSB 32 (HESS), commenting on the veracity of some statements.

Section 1:

(1) Probably true.

(2) As noted in the testimony by several experts on April 14th, although marijuana, specifically THC, may remain in the body for a long period of time,

it remains inactive, and well below threshold levels to impact behavior. Any adverse physical effects due to the fact that marijuana remains in the body so long have not, to my knowledge, been identified.
(3) As stated in the testimony on April 14th, this statement is inaccurate and is not supported by clinical evidence. (I cannot cite any specific references here, but given time I can probably find some.)

(4) Untrue! Refer to above discussion and appropriate references.

(5) Untrue! Marijuana and alcohol taken together result in what is referred to as a summative reaction or effect, in which the effects of both are stronger than either taken alone (1 + 1 = 2). Thus one would become twice as drowsy, uncoordinated, etc, than if either drug were taken by itself. **Marijuana does not have a synergistic effect on alcohol, that is, it does not *drive* the effects of alcohol, nor does alcohol *drive* the effects of marijuana.**

(6) Marijuana potency has increased (see documentation above), but not to the extent where 10% THC is common on the streets.

(7) True

(8) Patently untrue! There is **no evidence** that I know of to substantiate the claim that marijuana causes schizophrenia, etc. What is true that in special cases a severe marijuana overdose may result in a toxic state that produces behavior that is characteristic of or resembles schizophrenic-like behavior. But as soon as the marijuana is metabolized out of the body, that is, the toxic substance is reduced to below threshold level, the symptoms should clear up.

(9) See above discussion and references. There is no evidence to support this claim.

(10) There is no evidence to support this claim. See above discussion and references.

(11) I believe that there is some medical evidence to support these allegations concerning the harmful effects of smoking in general, as reviewed above, but they cannot be specifically attributed to marijuana.

(12) As reviewed above, some of these behaviors may be a function the short-term adverse effects of marijuana, subject to reversal upon its discontinuation. There is no evidence (see above) that marijuana's effects are lasting.

(13) If the intent here is to refer to the ingestion of passive smoke by the children as presenting a threat to health, evidence can substantiate that passive smoke can be harmful. But be aware that some researchers claim that passive smoke is not harmful. I believe, however, that sufficient documentation exists to support an argument that passive smoke, from tobacco products or from marijuana, appears to be harmful.

(14) True, but please interpret this statement in context of the historical discussion presented above.

In summary, it is my professional and personal opinion that this legislation, if passed in its present form, cannot be supported in court. The preponderance of research findings point to conclusions that are contrary to most of the allegations in the Bill. Moreover, passing the legislation as is would contribute, in my opinion, to an impression that Alaska is operating in a climate similar to that of the 1930's, one which may convey a message to scientists and others that emotions rather than rationality prevail. As such, I urge that the present legislation be deferred. If the legislature retains its interest in recriminalization of marijuana, then it has to prepare more factual and more rationale legislation, which accurately reflects what is known about the adverse effects of marijuana. A more objective approach would then allow the courts to weigh the arguments for or against, rather than dismiss poorly conceived legislation "out of hand."

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City of Ketchikan

Gateway Center for Human Services

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Ketchikan, Alaska 99901
907-225-4135/225-4164

April 20, 1988

House Health, Education and
Social Service Committee
P. O. Box V
Juneau, AK 99811

My name is Chip Ames, and I would like to address the House Health, Education and Social Services Committee, which I understand is hearing testimony regarding the recriminalization of Marijuana. I have worked in various clinical and supervisory positions in the field of substance abuse and chemical dependency treatment for the last 9 1/2 years. During this time I have been involved in treating adult and adolescent patients in both inpatient and outpatient treatment settings. I am presently employed as a Lead Counselor for the Gateway Center's Alcohol Treatment Division in Ketchikan, Alaska.

While I do not believe that we can effectively legislate "morality", I do believe that the laws we pass reflect the position our society takes on specific issues and that when we decriminalize an act, the implied message is that we condone or sanction that act. I am especially concerned about the effect that these messages have on our youth.

My experiences in the treatment field, leave me convinced that marijuana poses a significant threat to the physical and emotional health of the user. I believe, too, that while the ingestion of marijuana by an individual may occur in the privacy of one's home, the consequences of regular and chronic use have become a burden for all of us in our society to reckon with. Last year, in January, February, and March I reviewed a great deal of the literature on marijuana use in the chronic young user at the University of Washington Medical Library. I found the literature to be frequently confusing and often contradictory. In most cases, the methodology employed in the studies was quite poor. The intent of this letter is not to provide a further synopsis or evaluation of the massive research literature available on the pros and cons of marijuana use and abuse. I'm not sure that should be the criteria on which a legislator makes a decision about whether or not to recriminalize marijuana. I have chosen to base my testimony on my personal experiences with the clinical treatment of chronic marijuana users on a daily basis over the last ten years.

Over the last ten to fifteen years we have noted a profound shift in the profile of the patient population entering treatment for chemical dependency. As recently as ten years ago the average patient was a male, middle-aged alcoholic, and it was quite rare to see what we now refer to as poly-drug or multi-substance dependent patients. Today the average patient is a male or female in their mid-twenties, who is frequently chemically dependent on two or more drugs. The primary drugs dependency that we see today are alcohol and marijuana. While they are often used simultaneously, we are seeing an ever increasing number of "pure" marijuana addicts. It is common knowledge that marijuana potentiates the destructive affects of alcohol and visa versa, one enhancing the other so that small amounts of each leads to a very profound state of intoxication.

Speaking with our jail counselor, Don Gonser, he has informed me that of the clients that he sees in jail he estimates that 90% committed the crime for which they were incarcerated while under the influence of marijuana and/or alcohol and others drugs. I would estimate that in our residential recovery unit that over 75% of our admissions involve clients who are dependent upon both alcohol and marijuana. Frequently clients will abstain from alcohol use after treatment but continue to use marijuana to induce intoxication and then almost always return to an alcoholic drinking pattern. Restated, marijuana is one of the three primary causes of relapse after treatment. Relapse inevitably results in readmission to the treatment program.

The average cost of a treatment episode at our facility, which is supported by State grant dollars, is approximately $2,200. This figure does not including ancillary billing. Those clients who have insurance and can afford third party reimbursement for treatment, particularly adolescents who are unable to secure inpatient treatment in the Southeast area and are referred to private programs, the average cost of their treatment episode is between $5,000 -$8,000 for adults and $14,000 - $18,000 for adolescents. Many of the adolescents I see are exclusively dependent on marijuana. By their own self-accord they will acknowledge that their daily use from a young age has left them seriously addicted and unable to control their use.

We have only recently begun to see the destructive affects of chronic marijuana use on our young people. It seems the younger a person is when they begin their use the more rapidly the destructive affects of that use become apparent, and possibly, although no one is certain, the more irreversible the destructive affects of that chronic use may be. The symptoms that I commonly see displayed by the young, chronic users who frequently begin smoking prior to the beginning of their psycho-sexual development in adolescence, (I often see users who have

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Over the last ten to fifteen years we have noted a profound shift in the profile of the patient population entering treatment for chemical dependency. As recently as ten years ago the average patient was a male, middle-aged alcoholic, and it was quite rare to see what we now refer to as poly-drug or multi-substance dependent patients. Today the average patient is a male or female in their mid-twenties, who is frequently chemically dependent on two or more drugs. The primary drugs dependency that we see today are alcohol and marijuana. While they are often used simultaneously, we are seeing an ever increasing number of "pure" marijuana addicts. It is common knowledge that marijuana potentiates the destructive affects of alcohol and visa versa, one enhancing the other so that small amounts of each leads to a very profound state of intoxication.

Speaking with our jail counselor, Don Gonser, he has informed me that of the clients that he sees in jail he estimates that 90% committed the crime for which they were incarcerated while under the influence of marijuana and/or alcohol and others drugs. I would estimate that in our residential recovery unit that over 75% of our admissions involve clients who are dependent upon both alcohol and marijuana. Frequently clients will abstain from alcohol use after treatment but continue to use marijuana to induce intoxication and then almost always return to an alcoholic drinking pattern. Restated, marijuana is one of the three primary causes of relapse after treatment. Relapse inevitably results in readmission to the treatment program.

The average cost of a treatment episode at our facility, which is supported by State grant dollars, is approximately $2,200. This figure does not including ancillary billing. Those clients who have insurance and can afford third party reimbursement for treatment, particularly adolescents who are unable to secure inpatient treatment in the Southeast area and are referred to private programs, the average cost of their treatment episode is between $5,000 -$8,000 for adults and $14,000 - $18,000 for adolescents. Many of the adolescents I see are exclusively dependent on marijuana. By their own self-accord they will acknowledge that their daily use from a young age has left them seriously addicted and unable to control their use.

We have only recently begun to see the destructive affects of chronic marijuana use on our young people. It seems the younger a person is when they begin their use the more rapidly the destructive affects of that use become apparent, and possibly, although no one is certain, the more irreversible the destructive affects of that chronic use may be. The symptoms that I commonly see displayed by the young, chronic users who frequently begin smoking prior to the beginning of their psycho-sexual development in adolescence, (I often see users who have

begun smoking regularly at 7, 8, 9 and very frequently by 12 or 13 have established a regular pattern of use) are: apathy, outbursts of rage and anger, a very low frustration tolerance, impaired short-term and long-term memory, an impaired ability to think in abstract symbols, an impaired ability to complete goal oriented activities in a sequential manner, impaired concentration, poor tracking of multiple or complex concepts and a very shallow, diminished affect, particularly when not intoxicated.

The withdrawal symptoms that I commonly see among the chronic marijuana users, both young and old, include a state of irritability with frequent outbursts of uncontrolled anger, extreme impulsiveness, extreme emotional liability, greatly diminished concentration span, extremely low frustration tolerance, impaired short and long-term memory and again an inability to carry out complex activities in a sequential manner. Other symptoms that they report are insomnia, periods of cold sweating during the evening, loss of appetite, occasional tremors along with intense and profound cravings for the drug. The more obvious and intense symptoms generally tend to wane within thirty days after last use. The craving and some of the other more subtle symptoms seem to persist for up to two years in a state which we term sub-acute withdrawal syndrome.

Another severe problem that I commonly see with the chronic marijuana users who began at a young age is that the long term affects of being constantly intoxicated have left then unable to function emotionally as an adult. It seems that they do not or are unable to grow emotionally and that the state of being "high" causes them to miss moving through the normal developmental stages of adolescent and young adulthood that lead one towards maturity. These patients are emotional cripples. When not intoxicated they seem to have very little insight or ability to deal with inter-personal relationships. The skills that are lacking in this area prevent them from being able to function effectively in their marriages, in their home life, in their community life and in their work life. This is a particularly insidious and frightening consequence of long term marijuana use because what is obvious to me and others from the outside looking in, they frequently do not or are unable to see themselves. I believe this "blindness" to be a direct consequence of the use itself. For further information about the treatment of marijuana addiction I would refer you to the University of Washington Medical School and the University of Washington School of Sociology which together have come up with some very innovative programs to treat marijuana addicts. They certainly can provide you information about the reality of marijuana addiction and the complexity of its effective treatment. Some of the destructive long term affects of marijuana use cannot be found to be well

documented in much of the literature because they are just becoming apparent today. It is only since the late 1960's that a sophisticated society like ours has had to contend with chronic drug use amongst all strata of its society. It is only recently too that we have had the medical technology available that allows us to effectively study the consequences of this chronic use. I have a strong sense that over the next ten years we will sadly come to see that a significant percentage of our population will be in need of permanent and ongoing clinical support for the duration of their lives as a consequence of long term chemical dependency that began in early adolescence with heavy marijuana consumption.

Finally, much has been said about marijuana being a gateway drug that leads later to heavier use of more destructive drugs like alcohol, heroine, cocaine, etc. In my experience this is not an alarmist tactic but rather an accurate description of what occurs among a significant proportion of young chronic marijuana users. Frequently, they do seek ways to enhance the state of being high and the most common drugs that they turn to are alcohol and cocaine, both of which are extremely destructive drugs. Comparing marijuana to alcohol in a society that has become as chemically dependent as ours is ludicrous. Alcohol is an extremely toxic drug that affects the central nervous system in exactly the same manner as a barbiturate. If alcohol were presented to the market today under current FDA guidelines, it would not be readily available in small amounts by prescription. Alcohol is toxic to every organ in the system with which it comes into contact. The rate and incidence of alcoholism and alcohol abuse in Alaska is higher than I have seen anywhere that I have worked in the field of chemical dependency treatment. (I have worked in many states in this country.) From this perspective, I see no logic whatsoever in comparing marijuana to alcohol to justify its being available to legally use in the home. They are both destructive drugs, and in a society that has become as chemically dependent as ours the last thing we need are new readily available drugs to be utilized for the purpose of intoxication.

One further fact, the dollars spent on alcohol treatment and drug treatment in this state are greatly exceeded by the dollars spent on mental health. This is ironic because we are a combined mental health, drug-alcohol treatment center, with separate divisions. In speaking with the people that run and staff our mental health division they estimate that 80% of their clients are involved with serious alcohol and marijuana abuse and that a vast majority of their clients have chemical dependency problems that remain unaddressed, complicate treatment, and lead to chronic recidivisum, and rehospitalization. I know from personal experience working with our Community Support Program with the

chronically mentally ill that one of the most frequent causes of relapse and rehospitalization is use of marijuana and/or alcohol.

In closing I would like to say that I have found Alaska to be a beautiful land, populated by wonderful and interesting people. In Alaska I have met some of the most unique and kind people that I have met anywhere in my life, but there is a great sadness about Alaska too, and it is a sadness that I feel daily in my work, for never have I seen such an incidence of destructive alcohol and drug abuse as I have here in Alaska. To me it is a tragedy to see such a vast wealth of human potential being destroyed and it would behoove the state to spare no effort in doing what they can to combat a problem which threatens to overwhelm and ultimately devastate its people.

Sincerely,

Chip Ames CA (cc)

Chip Ames
Lead Counselor

cc: John Ellis, Co-Chairman
Nillo Kopnen, Co-Chairman
Robin Taylor

Alaska State Legislature

Please enter into the record my testimony to the H.E.S.S.
committee name

committee on S.B. 32 dated April 14, 1988
bill/subject

How Marijuana has Influenced my Life

This paper is done by a heavy marijuana user who has done this drug as his primary drug for the last 20 years but has used just about every abusive drug on the market. By all truth I should be a vegetable by now.

I first used marijuana at the age of 12 years. I was living with my father and step-mother and my step-brother Gary and I went over to a friends house and he offered some homemade blackberry wine to us. So I drank some and at the same time he offered a marijuana cigarette to me. I was real apprehensive at first but being a young curious kid I went ahead and smoked it. I choke and cough on every hit but finished the joint. I felt really carefree and very light headed.

For the next 2 years I smoked marijuana maybe once or twice a month, only on a recreational basis.

When I was 15 I was living with my step-father and mother and we moved from Oregon to Washington state and this is when I started a daily usage of pot. I didn't waste any time in finding how and where to get pot. I just enjoyed it too much. The high from pot was a major "Love Affair" with me at the age of 15. I would do just about anything to get a hold of it. I lie, cheat, steal or even beat somebody up to get it.

I was at the age of 16 when I had my first encounter with the law which was a combination of drinking beer and smoking pot. Marijuana has always made me feel powerful, brave and tough, so after a high school basketball game me and 3 friends went to a

Ronald E. Compton Ronald E Compton
Testifier

SELF
Representing (Optional)

PO Box 3067 Ketchikan, AK 99901
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local gravel pit, loaded rocks in the pick-up and proceeded to drive down country roads and knocked down 20 mail boxes and after I got up the next morning there was a county sheriff at my house and to make it short I was busted at the age of 16 for a federal offense. That still didn't slow my pot smoking down because about this age I found out my parents smoked pot also. So I had the understanding that it was O.K. to smoke pot then. My parents talked to me and asked me not to smoke at school but do it at home so I respected their wishes. I would come home and mom would smoke a joint with me. She grew marijuana on our little farm and at one time she even stuffed the Thanksgiving turkey with it. So my parents were a big influence with my pot addiction. I do not disrespect my parents to this day at all for it because I could have quit anytime I wanted to.

When I went into the service my pot addiction was a lot worse. I was still cheating, lying and stealing to get it. I would lie to myself, by saying I will pay this bill next payday so I could buy pot now. Until a month ago I was still doing this.

I have been married to my present wife Diana 10 years and everyday in those 10 years I used. My wife also used. It was at the point that if I didn't wake up and have a morning joint we would instantly start fighting. As long as we have marijuana we were the happiest couple on earth. The last 8 months though have been real tough because my wife realized I was married to my drug habit and not her. I was not paying the bills and I was mentally abusing my wife to such an extreme she left me about a month ago and now we are separated.

That's alright. They say we learn by our mistakes and I have learned a big one. Stay off of drugs and I will live a full and comfortable life. I am proud to say as of April 14 my 34th birthday I have been clean for 30 days.

Thank you for your valuable time and God Bless you and keep the fight going against marijuana possession.

Ron Compton

Mailing Address:
P. O. Box 3067
Ketchikan, AK 99901

Subject: Addiction to Marijuana

Marijuana is an addictive drug and I am living proof of it. If I don't have marijuana I am a very different person. I don't like to associate with people or cope with todays problems. I get real disgusted with life in general, but when I have pot everything is just fine. Pot is my escape from my problems, but when I come down off this drug, its real funny, my problems are still there so I smoke some more.

Don't tell me its in my head because I am a well-educated person and I know right from wrong. Marijuana is wrong! I too have listened to pro and cons about marijuana and it just took me 19 years to discover the cons plus a good marriage down the tube because of it.

Marijuana does lead to harder drugs because we are told marijuana has a good high but there are more powerful highs than this so as curious as the human operates who is on drug dependency, we experiment with other drugs!

In closing Marijuana is an addictive drug, to hell with the scientific experiments, just ask a true marijuana addict, myself!

Thank you.

Ron Compton

CORRECTION

THIS DOCUMENT
HAS BEEN REPHOTOGRAPHED
TO ASSURE LEGIBILITY

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Thank you.

Ron Compton

To: Co-chairs of the House HESS Committee, Rep. Kopenen and Ellis.
From: Arthur J. McBay, Ph.D., Forensic Toxicologist
Re: Teleconference on Senate Bill 32. April 14, 1988.

I was frustrated listening to the entire teleconference and being unable to respond as I was asked in your letter of April 2, 1988. In my opinion the proponents did not offer any new evidence of the effects of marihuana use. What was offered was for the most part anecdotal, unfounded, unpublished and uncontrolled studies. Would they as I often am, be willing to testify under oath as to their opinions and offer scientific support?

I believe the same comments fit the Findings (a) 1-14:

1. The reason why more than 400 compounds have been found in marihuana is because so much money has been spent on research. I know of no reports that the trace amounts of these substances that were found have any physiological or psychological activity. Bread and milk contain many compounds but what does this mean? Alcohol is a single compound, yet it kills more people than any other compound.
2. Is this good or bad? Everyone has arsenic, lead, halogenated hydrocarbons, and many other compounds in their body!
3. THC reaches the highest concentration 5 to 7 minutes after starting to smoke marihuana, if it reaches about 100 ng/ml in serum it will be less than 5 ng/ml in an hour or so (encl.1).
4. Can the statements of this non sequitur compound sentence be documented?
5. I have been responsible for the toxicology of 110,000 deaths in North Carolina from 1969 to date and for a lesser number in Massachusetts for 13 years prior to 1969. I have never seen a marihuana overdose death nor have I been able to document any that anyone thinks they have seen. The three that are often cited did not occur in North or South America, did not have adequate toxicology and were not adequately investigated or documented. I talked to the author of one of these reports, his urine findings were not acceptable but even if they were about all they would prove is that the deceased had been a marihuana user.

    I have enclosed our paper (encl. 2) of the investigation of 600 drivers killed in single-vehicle crashes in North Carolina where alcohol, marihuana and other drugs were sought. When cannabinoids were found in 47 of the 600 blood specimens, about 70% of the blood specimens contained at least 0.10% alcohol and most had low concentrations of THC.
6. I have heard the same high THC% marihuana is present in the 48 states, but government data reports that THC went from 2% to 2.8% from 1980 to 1986. Is data available from Alaska?
7. True see 6. What does it mean?
8. Documentation!
9. This is a new and startling report. Is there any reliable documentation of this? I suspect it is wild speculation and misinterpretation of Tashkin report.(New Engl.J.Med. 1988; 318: 347-51)

10-13 Documentation would be helpful!

14. Since it is illegal to use marihuana, any use must be "abuse." and if many people use it then there is a "high potentia.." Tetrahydrocannabinol is in Schedule II.
I have enclosed some of our studies as well as a report on the non-effects of heavy chronic long term smoking of marihuana in Costa Rica. I am not now or have I ever been affiliated with NORML or any similar organizations. I have never used marihuana nor do I intend to even legally.

Arthur J. McBay

CURRICULUM VITAE

NAME: Arthur John McBay 102 Kings Mtn. Ct.
Chapel Hill, NC 27514
(919) 929-4954

PLACE OF BIRTH: Medford, Massachusetts; Citizenship, U.S.
DATE OF BIRTH: January 6, 1919
MARITAL STATUS: Married, two children; Wife: Avis L. Botsford

EDUCATION:

Massachusetts College of Pharmacy, Boston	
B.S. in Pharmacy	1936-40
Massachusetts College of Pharmacy, Boston	
M.S. in Pharmaceutical Chemistry	1940-42
Purdue University	
Ph.D. in Pharmaceutical Chemistry	1946-48

OTHER EDUCATION: Harvard University, Massachusetts Institute of Technology, Boston University

REGISTRATION: Pharmacist, Massachusetts 1940

CERTIFICATION:

Toxicological Chemist, American Board of Clinical Chemistry	1963
Diplomate, American Board of Forensic Toxicology	1976

POSITIONS HELD:

Assistant Professor of Chemistry, Massachusetts College of Pharmacy	1948-53
Associate Professor of Chemistry, Massachusetts College of Pharmacy	1953-55
Research Consultant, Harvard Medical School	1952-53
Assistant in Legal Medicine, Dept. of Legal Medicine, Harvard Medical School	1953-63
Toxicologist, Criminalist, Consultant in Charge of the Massachusetts State Police Chemistry Lab.	1955-63
Teacher of Introduction to Criminalistics, Northeastern University	1962-63
Associate Professor of Toxicology, Law Medicine Inst. at Boston University	1963-69
Associate Professor of Pharmacology, Boston University Medical School	1963-69
Lecturer on Legal Medicine, Harvard Medical School	1965-67
Supervisor of Laboratory, Massachusetts Department of Public Safety	1963-69
Associate Professor of Pathology and Toxicology, University of North Carolina at Chapel Hill	1969-73

MILITARY STATUS:

Aviation Meterological Cadet, AAFCTTC,	1943
Weather Officer, USA Air Forces	1943-45
Captain, U.S. Air Force Reserve	1945-53

NORTH CAROLINA POISON FATALITIES 1970-1987

Office of the Chief Medical Examiner, Toxicology Laboratory, Chapel Hill

Year	1970-82	1983	1984	1985	1986	1987	Total
Number of cases	73892	6478	6635	6682	7208	7465	108360
Antidepressants	265	40	44	36	46	42	473
Barbiturates	320	18	9	8	6	11	372
Propoxyphene	325	13	13	16	18	11	376
Salicylates	88	8	6	6	7	6	121
Opiates	139	10	18	19	9	17	212
"Heroin"		11	11	13	6	13	
Cocaine	20	11	16	9	27	21	104

DRUGS	70-86	87
Meprobamate	47	
Ethchlorvynol	41	2
Thioridazine	21	1
Glutethimide	14	
Pentazocine	17	1
Caffeine	14	1
Phenothiazine	11	
Paraldehyde	8	
Strychnine	7	
Quinidine	6	
Quinine	5	
Chloral Hydrate	7	
Methapyriline	3	
Diphenhydramine	10	
Acetaminophen	8	
Chlordiazeopox.	3	
Lidocaine	4	
Digoxin	4	
Theophylline	6	
Propranolol	7	1
Phenylpropanola.	2	
Haldoperidol	5	
Phenelzine	3	
Insulin	2	
Single cases:		
Methotrexate,BMDA		
Methyprylon,Camphor		
Stramonium,Atropine		
Ketamine,Verapamil(2)		
Ipecac,Disopyramide		
Chloroquine,Phenytoin		
Flurazepam,Propylhexadrine(2)		
Diethylpropion,Bupivicaine		
Coumadin,Doxylamine,Temazepam		
Procainamide,Mesoridazine.		
Fentenyl		

ABUSED DRUGS	70-86	87
Cocaine&Heroin	above	
MDA	12	
Meperidine	11	1
Methadone	12	
Codeine	19	1
Methaqualone	4	
Phenmetrazine	1	
Oxycodone	2	
Hydromorphone	7	2
Hydrocodone	2	

CHEMICALS		
Arsenic	31	
Cyanide	18	1
Lead	5	
Mercury	3	
Fluoride	3	
"Pine Oil"	2	
Lye	3	
Detergents	2	
Formaldehyde	2	
Single cases:		
Phenolresorcinol		
Selenium,Nitrates		
Phenol		
Copper,Naphthol		
Phosphorus,"Navane"		
Methylsalicylic Acid		
"Paint thinner"		

SOLVENTS	70-86	87
Isopropanol	95	2
Methanol	18	
Trichloroethane	9	
Halothane	5	
Kerosene	2	
Toluene	4	1
Benzene	3	
Hydrocarbon	2	
Ethylene glycol	9	
Ether	3	
Dichloromethane	2	
Gasoline	5	1
Enflurane,hexane,xylene, 1 each		

GASES		
Freons	26	
Nitrous Oxide	8	1
Propane	4	
Hydrogen Sulfide	2	
Utility Gas	1	
Methyl bromide	1	

PESTICIDES		
Pesticides	2	
Parathion	4	
Paraquat	3	
Diazinon	6	1
Malathion	2	
Organophosphate	2	
Lannate	2	
Methomyl	2	
Nicotine	2	
Single cases:Telone-C		
Baygon,Dieldrin		
Azodren-S,Sevin		
"Vacor","Raid"		
Lindane		
Dichlorophenoxyacetic acid		

The above are the poisons detected, excluding ethanol and carbon monoxide.

McBay 3-4-88

OFFICE OF THE CHIEF MEDICAL EXAMINER
CHAPEL HILL, NORTH CAROLINA
TOXICOLOGY

ALCOHOL AND AUTO FATALITIES IN NORTH CAROLINA

SINGLE VEHICLE OPERATORS

Year	1981	1982	1983	1984	1985	1986
Sober*	92(25%)	80(27%)	79(31%)	92(30%)	115(38%)	145(37%)
Drinking	48(13%)	33(11%)	15(6%)	29(9%)	24(8%)	37(9%)
Influenced	227(62%)	184(62%)	163(63%)	185(60%)	164(54%)	213(54%)
Tested #(%)	367(86%)	297(88%)	257(84%)	306(87%)	303(86%)	395(90%)
Deaths	427	339	305	350	351	439

MULTIPLE VEHICLE OPERATORS

Sober	170(64%)	179(67%)	191(70%)	214(69%)	277(76%)	318(75%)
Drinking	27(10%)	24(9%)	22(8%)	20(6%)	25(7%)	26(6%)
Influenced	70(26%)	64(24%)	60(22%)	74(24%)	62(17%)	78(18%)
Tested #(%)	267(81%)	267(86%)	273(85%)	308(84%)	364(86%)	422(89%)
Deaths	331	310	321	365	424	473

PEDESTRIANS

Sober	78(42%)	84(45%)	65(45%)	98(47%)	90(47%)	91(43%)
Drinking	13(7%)	10(5%)	7(5%)	8(4%)	6(3%)	17(8%)
Influenced	95(51%)	91(49%)	73(50%)	100(49%)	94(49%)	102(49%)
Tested #(%)	186(75%)	185(78%)	145(73%)	206(79%)	190(77%)	210(81%)
Deaths	248	238	199	260	247	259
MV deaths	1551	1388	1314	1521	1552	1743

*= % alcohol: Sober= <0.02 Drinking 0.02-0.09 Influenced >0.09

Passengers and motorcyclists excluded

McBay 4/8/87

Cannabis in Costa Rica by William E. Carter, Editor, A publication of Inst. for the Study of Human Issues, Philadelphia, 1980.

This is the report of a study, funded by NIDA (National Institute on Drug Abuse), of the effects of marihuana use where 86 chronic users were compared with 156 non-users.

The users chronically smoked an average of 10 marihuana cigarettes a day (2.5 to 40) for a minimum of 10 years and an average of 17 years. The cigarettes contained from 1.3 to 3.7% THC.

Most of the users were stable smokers, "invisible" solid productive citizens. The objective was to study was to identify gross or subtle changes in body and central nervous system functions which could be attributable to marihuana, none was found. No real consequences of prolonged use of the drug were uncovered. This was found to be in keeping with the controlled studies carried out in Jamaica and Greece.

On the basis of their research they were convinced "that if chronic marijuana use leads in the long run, to deleterious effects, these must be subtle indeed.

Arthur J. McBay, Ph.D., Forensic Toxicologist

Full copy Available from HESS Comm Hre Staff

Andrew P. Mason,[1] *B.S. and Arthur J. McBay,*[2] *Ph.D., DABFT*

(1)

Cannabis: Pharmacology and Interpretation of Effects

REFERENCE: Mason, A. P. and McBay, A. J., "*Cannabis:* Pharmacology and Interpretation of Effects," *Journal of Forensic Sciences*, JFSCA, Vol. 30, No. 3, July 1985, pp. 615-631.

ABSTRACT: A selective introductory review of the *Cannabis* literature is presented. Subjects reviewed include the relative psychoactivities of *Cannabis* constituents, the disposition and distribution of THC and its metabolites, the relative psychoactivities of THC metabolites, and the use of cannabinoid concentrations in physiological fluids in interpretations of the significance of *Cannabis*-induced effects. The pharmacology of cannabinoids in humans is emphasized.

KEYWORDS: toxicology, marijuana

Marijuana and other *Cannabis* products are used by a significant proportion of people in our society. When smoked or ingested, these substances produce perceptual, cognitive, affective, and behavioral changes in the user. The *Cannabis* constituent that is responsible for the production of the majority of this psychoactive response is (−)-trans-delta-9-tetrahydrocannabinol or THC [1]. There has been great concern that the psychoactive response experienced by marijuana users has a detrimental effect on the performance of complex coordinated psychomotor skills. Naturally, the impairment of performance would be of greatest concern in those individuals with direct responsibility for the health and safety of others and in individuals whose impaired actions could potentially be dangerous to themselves or to others near them. Motor vehicle operators, pilots, air traffic controllers, law enforcement or emergency aid personnel, military personnel, and industrial workers are all good examples of people whose impaired performance could potentially be dangerous.

During the last decade, remarkable progress has been made in the ability to analyze biological samples for cannabinoid compounds. This ability was developed as a prerequisite for, and was instrumental in the acquisition of data concerning the pharmacology, pharmacokinetics, metabolism, behavioral effects, and toxicology of *Cannabis* constituents. These analytical methods and the knowledge derived from their use in basic research on cannabinoids are now being used in attempts to interpret the significances of cannabinoid concentrations found in forensic science specimens. The frequency with which these analytical methods are used and the frequency with which forensic scientists are required to provide estimates of the probable significances of *Cannabis*-induced effects or the degree of impairment experienced by a *Cannabis* user based on cannabinoid concentrations in biological specimens are both expected to increase. Use of these methods and in-

Received for publication 17 Sept. 1984; revised manuscript received 18 Oct. 1984, accepted for publication 19 Oct. 1984.

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[2]Chief toxicologist, Office of the Chief Medical Examiner, and professor, Division of Pharmaceutics, School of Pharmacy, and Department of Pathology, School of Medicine, University of North Carolina, Chapel Hill, NC.

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Authorized Reprint from
Journal of Forensic Science Oct. 1984

(2)

Andrew P. Mason.[1] *B.S. and Arthur J. McBay,*[2] *Ph.D.; D.A.B.F.T.*

Ethanol, Marijuana, and Other Drug Use in 600 Drivers Killed in Single-Vehicle Crashes in North Carolina, 1978–1981

REFERENCE: Mason, A. P. and McBay, A. J., "Ethanol, Marijuana, and Other Drug Use in 600 Drivers Killed in Single-Vehicle Crashes in North Carolina, 1978–1981," *Journal of Forensic Sciences*, JFSCA, Vol. 29, No. 4, Oct. 1984, pp. 987–1026.

ABSTRACT: Although the use of ethanol, marijuana, and other drugs may be detrimental to driving safety, this has been established by direct epidemiological evidence only for ethanol. In this study, the incidences of detection of ethanol (and other volatile substances), delta-9-tetrahydrocannabinol (THC), barbiturates, cocaine and benzoylecgonine, opiates, and phencyclidine were determined in an inclusive population of 600 verified single-vehicle operator fatalities that occurred in North Carolina in 1978 to 1981. The incidence of detection of amphetamines and methaqualone were determined for drivers accepted for study during the first two years (n = 340) and the last year (n = 260), respectively. Blood concentrations of 11-nor-delta-9-tetrahydrocannabinol-9-carboxylic acid (9-carboxy-THC) were determined in THC positive drivers. EMIT cannabinoid assays were performed on blood specimens from all drivers accepted for study during the third year, and the feasibility of using the EMIT cannabinoid assay as a screening method for cannabinoids in forensic blood specimens was investigated. The incidence of detection of ethanol (79.3%) was far greater than the incidences determined for THC (7.8%), methaqualone (6.2%), and barbiturates (3.0%). Other drugs were detected rarely, or were not detected. Blood ethanol concentrations (BECs) were usually high; 85.5% of the drivers whose bloods contained ethanol and 67.8% of all drivers had BECs greater than or equal to 1.0 g/L. Drug concentrations were usually within or were below accepted therapeutic or active ranges. Only a small number of drivers could have been impaired by drugs, and most of them had high BECs. Multiple drug use (discounting ethanol) was comparatively rare. Ethanol was the only drug tested for that appears to have a significantly adverse effect on driving safety.

KEYWORDS: toxicology, motor vehicle accidents, alcohol, marijuana

It is accepted that ethanol use has a detrimental effect on the performance of drivers because it impairs sensory input and perception, judgement and cognition, motor control, and their integration and coordination. It is also known that the use of ethanol is strongly associated with traffic fatalities. Nationally, between 40 and 55% of all drivers involved in fatal crashes have blood ethanol concentrations (BECs) greater than or equal to 1.0 g/L [*1*],[3] the

Presented at the 34th Annual Meeting of the American Academy of Forensic Sciences, Orlando, FL, 8–11 Feb. 1982. Received for publication 9 Jan. 1984; accepted for publication 30 Jan. 1984

[1]Graduate student, Division of Medicinal Chemistry and Natural Products, School of Pharmacy; and Office of Chief Medical Examiner, University of North Carolina, Chapel Hill, NC.

[2]Chief toxicologist, Office of the Chief Medical Examiner and professor, Division of Pharmaceutics, School of Pharmacy, and Department of Pathology, School of Medicine, University of North Carolina, Chapel Hill, NC.

[3]1.0 g/L = 100 mg/dL = 100 mg% = 0.10%.

To: Alaska State Legislature
House of Representatives
Committee on Health, Education
and Social Services
Pouch V
Juneau, AK 99811

From: Tod H. Mikuriya, M.D.
1168 Sterling Avenue
Berkeley, CA 94708

Date: April 18, 1988

Re: Senate Bill 32 (Hess)

Thank you for the opportunity of testifying yesterday via teleconference regarding the medical aspects of cannabis four days ago. This is in response to the request to address the 14 findings enumerated in the proposed legislation.

I am in sympathetic understanding of the legislator who complained of the bewildering contradictory evidence on the subject. Regretfully, things have not changed since I began researching the effects of cannabis during my sophomore year in medical school in 1959. Review of the medical literature in that year revealed a significant bias against the medicinal use and for the adverse effects coinciding with the national efforts to criminalize marijuana in 1937.

That federal effort resulted in the City of New York setting up a blue ribbon panel of medical, psychiatric, psychological, and social services experts to study the real vs fantasied hazards of marijuana use. The result of this commission started in 1938 facilitated by the New York Academy of Medicine in response to concerns expressed by mayor Fiorello LaGuardia was reported six years later after a well-funded careful study. It was rejected and condemned by Harry Anslinger, head of the Federal Bureau of Narcotics.

Things have not changed much since.

My book "Marijuana Medical Papers 1839-1972" which are attached under separate cover describes medicinal applications commonly recognized in all the lists of drugs such as the U.S. Pharmacopeia prior to being purged. The official contemporary federal stance is that these listings and descriptions are "folk medicine". The resultant policy is to classify crude cannabis preparations as new drugs to avoid the dissonance of having the substances "grandfathered" in under FDA regulations.

Deprived of availability to the physician as a medicinal tool, clinical ignorance has prevailed permitting the ascendance of the moral pharmacologists and the "send them a signal" school of drug propaganda which prevails today.

The "Findings" in section 1 are the flawed products resulting from this defective informatation derived from this bias.

1. marijuana and other cannabis preparations may contain over 420 different compounds.

Irrelevant. So do all complex organic compounds. One could go crazy with fear analyzing one's food using a specious premise of complexity of compounds in itself constituting a threat.

2. THC is insoluble in water, soluble in fat and goes into the fatty tissues where it takes as long as 30 days to be eliminated from the body.

True, but the connection between presence of inactive breakdown products with dysfunction has yet to be shown. The slow breakdown may be a factor to prevent the drug from being addictive as compared with the water soluble opioids.

3. the buildup of THC in the system means accumulation of higher drug levels reach at any time after a single dose.

False. Three wrongs don't make a right- just three times as wrong. There is no "buildup" which redundantly does not mean accumulation and ignores the rapid conversion from THC to inactive metabolite. The origin of finding #3 appears to be the product of contamination of a grade school level science class with a commercial for floor wax.

4. the buildup of THC causes the user to smoke more marijuana to achieve the desired high and may result in loss of sleep, appetite, and initiative, as well as moodiness and depression.

False & bizarrely contradictory. If anything LESS marijuana is needed to achieve the desired high as described in the literature starting from the 1944 Mayor's Committee report. How could this be if we were to believe finding #3? Perhaps finding 4 was used to cover cases not explained by finding 3.

5. it is possible for a human being to overdose from the use of marijuana, especially if it is used in conjunction with alcohol, because it increases the effects of alcohol;

False, confused and mixed up with alcohol. Both drugs have distinctly different profiles of pharmacologic activity. Some interactions may be synergistic, others antagonistic and highly dependent on dose level of each.

6. the THC content of commonly obtainable marijuana has increased from less than one percent 10 years ago to as high as 10 percent today;

False. See attached prepublication copy of Cannabis 1988 Old Drug "New" Dangers to appear in the current Journal of Psychoactive Drugs.

7. No comment.

8. Review of the literature does not support the notion that the use of cannabis causes schizophrenia. Starting with the first large scale inquiry on the subject by the Indian Hemp Drugs Commission 1893-1896 by the British Government, and every health commission that has studied the very same issue subsequently has concluded there is no causal connection.

Cannabis in large doses in naieve subjects is a familiar theme in the early medical literature that has an initial acute intoxication phase which may include symptoms of illusions and hallucinations. (Marijuana Medical Papers 1839-1972)

These stimulating symptoms of oral cannabis overdose give way to a sedative effect roughly complementary to the initial excitatory effects: the more stimulating the initial effects, the deeper the resulting sedation.

The question of the analgesic aspects of the experience are probably overstated in that the decrease in sensitivity to painful stimuli is absent unless there is "superdose" level intoxication.

Otherwise the analgesic effects are probably most useful on pain originating from irritability of the central nervous system or possibly local effects on certain blood vessels in covering of the brain.

9. False. There are no reputable studies that cannabis may cause lung cancer in 3 years.

10. Still Unknown. There is no epidemiologic data to support the in vitro studies that claim teratogenicity. A study of the quality and longevity of the Framingham, Massachussetts study that conclusively established the connection between tobacco smoking and lung cancer and other illnesses is desperately needed to look into this issue.

11. No irreversible changes in the brain have been proven.

There is clearly a hazard from the irritation to the tracheobronchial tree from smoked marijuana with high levels of chronic use causing sinusitis, bronchitis and pharyngitis.

Increase in heart rate is dose related but should pose no

hazards unless an individual was unusually susceptible because of preexisting heart disease.

There is no evidence to support the assertion that there is decreased circulation.

12. Cannabis in either overdose or use by a naieve subject can induce loss of memory, anxiety, panic, paranoia, and psychosis which wears off as soon as the effects of the drug enter the sedative phase.

Cannabis in chronic use patterns is clearly an effective anxiolytic or minor tranquillizer and sedative. This is the effect sought by most users. Indeed in many individuals the chronic sedative effects will adversely effect thinking, reading comprehension or any activity requiring sustained mental acuity.

Indeed some individuals will attempt to self-medicate away feelings of anxiety and depression and this will lead to a psychological dependence that may be harmful.

13. The assertion that the use of even small amounts of marijuana by adults in the home subjects children present to a substantial health hazards is without foundation and cannot be demonstrated.

14. No comment.

Review of the type and content of research discloses a heavy investment to depict cannabis as a "killer weed" without medicinal redeeming importance. I consider this an abuse of the medical profession by special interest groups within the enforcement/corrections community whose existence depend on the current social policy.

I concur with the other medical witness who opined that the findings themselves would be the basis of voiding the legislation because they would not stand up to court scrutiny.

Tod H. Mikuriya, M.D.

FAX TO AREA CODE (907) 586-9548 -- URGENT, PLEASE FORWARD AS SOON AS POSSIBLE

ATTENTION: Representative Johnnie Ellis, Co-Chair House HESS Committee, and Niilo Coponen, Co-Chair, HESS Committee or Jim Nordlund @ (907) 465-3759.

The request that I comment on some of the Statement of Facts and Findings in SB 32 only arrived in my mail yesterday, April 27th. Thus, my comments, if they are to be of any value to you, must be presented in this somewhat hasty fashion. I think the status of the facts is fairly clear and easy to comment on. If I would have had more time, I would have chosen my words more carefully than those that follow. I do not think my conclusions would be any different, however.

I will consider the list of findings as they appear in SB 32 on the document sent to me that has the date 3/31/87 at the top of it.

Finding No. 1. Yes, cannabis contains hundreds of compounds whose biological activity has not been determined.

Finding No. 2. Yes, this is true, but not necessarily relevant as to health problems. All psychoactive drugs used for therapy (tranquilizers, antidepressants, antianxiety, antihistamine, etc., drugs) have these properties to a degree.

Finding No. 3. Yes, this is quite true, both as to THC and for any psychoactive drug with the properties in Finding No. 2.

Finding No. 4 deals with a complex issue on which there is relatively little data. It is not necessarily the "build-up" of THC that causes these things. Far more complicated adaptive measures are likely to be the cause.

Finding No. 5. This seems to be stated just backwards. The use of marijuana, at least in theory, would more likely lead to overdose from alcohol. Overdose from alcohol is a far more dangerous condition than overdose from marijuana under most circumstances. Although laboratory data suggests this is a possibility, I'm aware of relatively little clinical data that suggests it happens very often. Remember, 18 million people are said to be using marijuana regularly and most of them are using alcohol regularly as well.

Finding No. 6. This is true, though the 10% estimate is probably not a precise one.

Finding No. 7. I would assume this is true in Alaska.

Finding No. 8. Marijuana does not "cause" schizophrenia. People who have the disease schizophrenia seem more sensitive to the psychoactive effects of marijuana. Marijuana certainly can produce a psychotic state that in some ways resembles schizophrenia, but it does not cause it. It does cause delusions, hallucinations and alteration in sensation. I am aware of no good medical evidence that users are unable to respond to pain, at least to the degree that it has come to anyone's attention clinically.

Finding No. 9. I am aware of no evidence that marijuana causes lung cancer in "three years". There is much data to expect that in some people marijuana smoking may cause the same lung diseases as does tobacco smoking. There is some laboratory data that suggests that the progression of such lung diseases may be faster after marijuana smoking, but there is no body of medical evidence from clinics or hospitals that say this is occurring.

Finding No. 10. This is true to the extent that eggs, sperm, hormones and, in animals, fetus development is altered by exposure to cannabinoids. Marijuana users do have more

undersized offspring, but to separate marijuana use from their tobacco and alcohol use, which clearly affect the fetus, is so difficult to do that the data must remain tentative. I am aware of no clinical cases where "deformed" fetuses have clearly been a result of marijuana use alone.

Finding No. 11. "Irreversible changes in the brain" have been demonstrated by some scientists in some animals, though not all scientists agree that this is an effect of the marijuana. Certainly, the evidence from the experience with humans is not convincing. So far as the other physical reactions listed in this finding, they do occur.

Finding No. 12. Yes, these all do occur and are among the more predictable, expected effects of marijuana.

Finding No. 13. This seems to overstate the facts. Children growing up in a home where the adults are using marijuana are more likely, other things being equal, to use marijuana than they would if the adults were not using drugs. There is a fair amount of data that suggest that is so. Whether it's fair to call this a "substantial health hazard" is less clear to me.

Finding No. 14. Yes, cannabinoids have a high potential for abuse. Abuse, of course, is a term that is not necessarily predictive of health hazards or any spectrum of health hazards. It mainly reflects behavior that society or some significant subset of society views with disfavor.

I am intrigued by the findings listed under Item B 1 through 4. If, in fact, patterns of marijuana use in Alaska represent more or more frequent use than elsewhere, then in a way the Alaska experiment has produced some useful findings. Many of us predicted that as marijuana possession laws become more liberal, other things being equal, frequency and amount of use are more likely to increase. Certainly, in most states in the United States, particularly amongst younger people, marijuana use either has leveled off or is dropping in recent years. If the pattern really is different in Alaska (and I am not familiar with the data), then that is certainly a compelling reason to re-examine your state's policy regarding possession.

I am puzzled by just how your legislature arrived at the magical figure of 4 ounces of marijuana as being an amount worthy of some special attention. Four ounces is enough to make about 120 good size marijuana cigarettes. If one is considering material of the high potencies now available, 4 ounces is enough to make 300 or 400 marijuana cigarettes. That strikes me as a lot of marijuana smoking?

In summary, my overall impression of the findings listed in SB 32 is that none of them represent anything new that wasn't reasonably well accepted and known to researchers of marijuana in the early 1980's. Certainly the public's perception, the media's perception, and perhaps law maker's perception of the issues has changed considerably since the early 1980's. Unfortunately, as is often the case, these changes in perception do not necessarily reflect any new data, but rather just a belated recognition of something that was there all the time but unappreciated.

Sincerely,

Reese T. Jones

Reese T. Jones, M.D.
Professor of Psychiatry
University of California, San Francisco
San Francisco, California 94143
(415) 476-7452

RTJ:kw

ALASKA STATE LEGISLATURE
HOUSE OF REPRESENTATIVES
RESEARCH AGENCY

P.O. Box Y, State Capitol
Juneau, Alaska 99811-3100
Mail Stop 3100
(907) 465-3991

April 19, 1988

MEMORANDUM

TO: Representatives Johnny Ellis and Niilo Koponen

ATTN: Jim Nordlund

FROM: Karla Hart
Legislative Analyst

RE: **Background on Findings in CSSB 32 (HESS)--Marijuana**
Research Request 88.245

You requested background information on the findings in CSSB 32 (HESS), an Act relating to marijuana. The original version of SB 32 is an exact copy of CSHB 698 (Jud) which was considered in 1984. The 1987 HESS Committee Substitute for SB 32 added four new findings to Section 1(a) and all of the findings in Section 1(b). It also incorporated minor revisions to five Section 1(a) findings (Attachment A).

Following is a summary of committee activity relating to the consideration of the recriminalization of marijuana during the Thirteenth and Fourteenth Legislatures.

March 5, 1984-- HB 698 was introduced by the Judiciary Committee (then chaired by Representative Charlie Bussell). The original version of the bill did not include findings.

March 14, 1984-- the committee heard testimony in favor of HB 698 from the Department of Law.

March 16, 1984-- Representative Bussell held a public hearing on HB 698 in Barrow. Two individuals testified, one in support and one opposed to the recriminalization of marijuana.

March 17, 1984-- the committee met in Anchorage to receive public testimony on HB 698. Nine individuals testified, one in support and eight opposed to the recriminalization of marijuana.

March 27, 1984-- the committee heard expert testimony from Dr. Reese T. Jones, Professor of Psychiatric Institute, University of California, San Francisco and Dr. Gabriel G. Nahas, Professor of Anesthesiology, Columbia University (both via telecommunications).

April 17, 1984-- the committee heard testimony against the recriminalization of marijuana from Dr. Aaron Wolf of Anchorage and discussed various aspects of the effect of marijuana on the body.

April 18, 1984-- HB 698 passed out of committee (five do pass, two do not pass) with a zero fiscal note.

May 5, 1984-- HB 698 was recommitted to the Judiciary Committee to add the findings of the committee at the recommendation of the Department of Law. A list of "some of the sources" of the committee's findings is found in Attachment B, along with a clipping from the Anchorage Daily News and background on the expert witnesses.

May 7, 1984-- without discussion, a Judiciary Committee substitute which included findings was adopted (one do not pass, five committee substitute) along with a Judiciary fiscal note (Attachment C--fiscal note). A Finance Committee referral was added by unanimous consent.

1984-- CSHB 698 (Jud), an Act relating to Marijuana, died in the Rules Committee.

Jack Chenoweth, Legislative Counsel, reviewed the drafting file for HB 698, an Act relating to marijuana. He said that the only backup in the file is a one and one-half page typewritten list of statements relating to marijuana (with no citations) and a brief memorandum stating that the bill should show the hazards of marijuana.

I found no committee minutes indicating any formal discussion of the recriminalization of marijuana during the Fourteenth Legislature (1985-86). Several bills providing for the recriminalization of marijuana were introduced, as was one resolution proposing a change to the Alaska Constitution to limit the right to privacy with regard to the use of illegal drugs. None of the legislation passed out of the first committee of referral.

I hope this information is helpful. If you have questions, please call.

Attachments

ATTACHMENT A

CSSB 32

Offered: 3/31/87 5-0131B
Referred: Judiciary & Finance

Original sponsors: Fischer and Faiks

BY THE HEALTH, EDUCATION AND SOCIAL SERVICES COMMITTEE

IN THE SENATE

CS FOR SENATE BILL NO. 32 (HESS)

IN THE LEGISLATURE OF THE STATE OF ALASKA

FIFTEENTH LEGISLATURE - FIRST SESSION

A BILL

For an Act entitled: "An Act relating to marijuana; and providing for an effective date."

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF ALASKA:

* Section 1. FINDINGS. (a) The legislature finds that marijuana use is a serious health problem for the following reasons, each of which constitutes a legitimate and compelling state interest:

(1) marijuana and other cannabis preparations may contain over 420 different compounds; New Finding.

Revised (2) tetrahydrocannabinol (THC), one of the pharmacologically active compounds in marijuana, is not soluble in water, but goes into the fatty tissues of the brain, testicles, ovaries, and other internal organs, and takes as long as 30 days to be eliminated from the body;

(3) the buildup of THC in the system means that repeated administration of even small doses may lead to an accumulation of the drug higher than levels reached at any time after a single dose; New Finding

(4) the buildup of THC in the body causes the user to smoke more marijuana to achieve the desired high and may result in loss of sleep, appetite, and initiative, as well as moodiness and depression;

(5) it is possible for a human being to overdose from the use of marijuana, especially if it is used in conjunction with alcohol, because it increases the effects of alcohol;

Revised (6) the THC content of commonly obtainable marijuana has increased from less than one percent 10 years ago to as high as 10 percent today;

(7) marijuana with THC content higher than one percent is generally available in the state, through both importation and local cultivation; New finding

Revised (8) marijuana may cause schizophrenia, illusions, and hallucinations, including a dulling of the senses, creating the possibility that the user is unable to respond to body signals such as pain;

(9) although it may take a heavy cigarette smoker as long as 20 years to develop lung cancer, one marijuana cigarette a day may cause lung cancer in three years;

(10) THC affects eggs, sperm, sexual hormones, and the development of a fetus and marijuana use may result in deformed or undersized offspring;

(11) other physical reactions to marijuana include irreversible changes in the brain, sinusitis, pharyngitis, bronchitis, emphysema, increased heart rate, and decreased blood circulation;

Revised (12) other psychological reactions to marijuana include loss of memory, anxiety, panic, paranoia, psychosis, psychological dependence, and impairment in thinking, reading comprehension, verbal and arithmetic problem solving, and perception of distance and time;

(13) the use of even small amounts of marijuana by adults in the home subjects children present to a substantial health hazard; and

(14) marijuana and tetrahydrocannabinols have been found by the United States Congress to possess a high potential for abuse. New finding

(b) The legislature further finds that All new

(1) patterns of marijuana use in the state have changed over the past decade;

(2) the daily use of marijuana in the state has increased to as high as four percent among the general population and as high as six percent among secondary school students;

(3) marijuana use in the state within both the general population and among adolescents is significantly higher than in the nation as a whole;

(4) there is a direct relationship between the use of marijuana at home by adults and the percentage of secondary school students who experience disciplinary and academic problems in public schools; over the last three years in the Anchorage School District, of the 230 students who have been suspended from school for possession or use of marijuana, 29 percent have indicated that marijuana is used by adults in their living environment;

(5) the changing patterns of marijuana use and the relationship between marijuana use by adults and adolescents have significantly compromised the state's legitimate efforts to prevent the spread of marijuana use to adolescents and protect the health of adolescents; and

(6) these efforts constitute a legitimate and compelling state interest.

Revised) The legislature further finds there is a legitimate and compelling governmental interest, based on testimonial and scientific evidence, that the public health and welfare will suffer if personal use of marijuana even in small amounts is allowed.

* Sec. 2. AS 11.71.060(a) is amended to read:

(a) Except as authorized in AS 17.30, a person commits the crime of misconduct involving a controlled substance in the sixth degree if the person

(1) uses or displays any amount of a schedule VIA controlled substance or possesses one or more preparations, compounds, mixtures, or substances of an aggregate weight of <u>less than one-half pound</u> [ONE OUNCE OR MORE] containing a schedule VIA controlled substance [ON A PUBLIC STREET OR SIDEWALK OR ON THE PREMISES OF A PUBLIC

CARRIER OR BUSINESS ESTABLISHMENT OR IN ANY OTHER PUBLIC PLACE]; or

[(2) KNOWINGLY POSSESSES ANY AMOUNT OF A SCHEDULE VIA CONTROLLED SUBSTANCE WITHIN THE IMMEDIATE CONTROL OF THAT PERSON WHILE OPERATING A PROPELLED VEHICLE;

(3) BEING UNDER 19 YEARS OF AGE, POSSESSES ONE OR MORE PREPARATIONS, COMPOUNDS, MIXTURES, OR SUBSTANCES OF AN AGGREGATE WEIGHT OF LESS THAN FOUR OUNCES CONTAINING A SCHEDULE VIA CONTROLLED SUBSTANCE;

(4) POSSESSES ONE OR MORE PREPARATIONS, COMPOUNDS, MIXTURES, OR SUBSTANCES OF AN AGGREGATE WEIGHT OF FOUR OUNCES OR MORE CONTAINING A SCHEDULE VIA CONTROLLED SUBSTANCE; OR]

(2) [(5)] refuses entry into a premises for an inspection authorized under AS 17.30.

* Sec. 3. AS 11.71.070 is repealed.

* Sec. 4. This Act takes effect immediately under AS 01.10.070(c).

ATTACHMENT B

Miscellaneous Documents on Marijuana

ANCHORAGE DAILY NEWS

[illegible]

3.9.84

Bussell: 'Close door on marijuana use'

By K.C. [illegible]
Daily News reporter

House Judiciary Chairman Charlie Bussell, R-Anchorage, has drafted a bill that would "close the door on marijuana use" in the state by making illegal the possession of any amount of the drug.

The bill was introduced by the committee earlier this week.

Current statutes, barely a year old, permit possession of up to a quarter pound of marijuana for personal use in one's own home.

Rep. Don Clocksin, a minority member of the committee, said the bill is "a waste of time" for legislators because they decided the marijuana issue just [illegible] years ago.

Law enforcement officials say the proposed law would not have a substantial effect on current enforcement patterns. Busting drug dealers, not users, would continue to be the focus of police and courts.

Bussell said he drafted the bill because Alaska's current law is "out of step with other states' laws and federal guidelines regarding marijuana."

Alaska, Hawaii and Oregon are the only states that permit any use of marijuana. Federal laws prohibit [illegible] possession.

He said the bill reflects a conservative "wave" that he [illegible] sweeping the country. "[illegible]," I would say that the public would support [illegible] marijuana [illegible]."

But Clocksin, D-Anchorage, said he doubts Bussell's reasons for introducing the bill. "There's no justification for it.

"The law we passed in 1982 was a [illegible] and fair compromise," he said. "We should stick with it. This new bill is a waste of the Legislature's time."

The Alaska Legislature voted to allow private use of marijuana and decriminalize [illegible] in 1975, the same year the state Supreme Court ruled that possession of marijuana in a person's home for personal use was constitutionally protected.

The court ruled that [illegible] [illegible] associated with marijuana use were not substantial enough to justify the state's intrusion into citizens' constitutional right to privacy.

Revised drug laws passed in 1982 [illegible] home-growing [illegible] [illegible] of [illegible] [illegible].

The [illegible] [illegible] make possession of any amount of the drug a misdemeanor offense with a maximum punishment of [illegible] fine and 90 days in jail.

Bussell said [illegible] [illegible] since the 1975 court decision [illegible] the state [illegible] enough to ban marijuana-smoking completely.

He cited no specific health studies, saying such research would be brought out when hearings on the bill begin.

Dan Hickey, chief prosecutor for the state, said the state's policy of prosecuting drug users would not change if lawmakers pass a blanket ban on marijuana.

"Our emphasis is not in the prosecution of drug abusers," he said. "Our focus is on major distributors and traffickers.

"Our opinion on that would not change if this bill becomes law."

Anchorage Police Chief Brian Porter said he supports banning all marijuana use but does not see the department shifting its sights to individual users. "We might make a few arrests initially to get the [illegible] out," he said. "I don't see the department putting out [illegible] more officers to bust [illegible]."

Porter said such a law would [illegible] the state of hypocrisy in the current situation, which [illegible] [illegible] [illegible] [illegible].

"There's a hole in the current law," said Lt. George [illegible], who heads the Anchorage Police Department's Metro Drug Unit. "We're creating a market for the use of marijuana — [illegible] people into purchasing — while the sale of pot is still illegal.

"Obviously the majority of users don't grow their own," he said. "If they are, I want to know who's buying all the stuff that's being smuggled into the state."

Clocksin said he has heard nothing about health studies that would justify prohibiting private use of marijuana. "What Bussell is trying to do is to barge into people's homes and tell them what to do," he said.

He called Bussell a "conservative 'extremist'" who doesn't represent the mainstream" of public sentiment.

POUCH V
JUNEAU, ALASKA 99811
(907) 465-4648

Alaska State Legislature
HOUSE OF REPRESENTATIVES

REPRESENTATIVE
CHARLIE BUNDELL
CHAIRMAN

Committee on Judiciary

GUEST SPEAKERS

2:00 P.M.
Dr. Reese T. Jones
Professor of Psychiatry
Langley Porter Psychiatric Institute
University of California - San Francisco

Dr. Jones is a clinical psychiatrist at the University of California at San Francisco and served as a member of the distinguished commission of scholars sponsored by the Institute of Medicine to study the physiological and psychological effects of marijuana. The report, entitled "Marijuana and Health," is recognized by the medical community as one of the preeminent academic works on the subject.

2:30 P.M.
Gabriel G. Nahas O.B.E, M.D., Ph.D.
Professor of Anesthesiology
Columbia University
College of Physicians and Surgeons

Dr. Nahas is a professor at Columbia University in New York City and is renowned as a pioneer in the research of the biological effects of marijuana. Considered by many as the foremost authority on the subject, Dr. Nahas has authored two books Keep off the Grass and Marijuana: Biological Effects.

" Charlie - Blurb to be read into record on HB 698 Monday, 8a.m., May 7th

Other than hearing considerable testimony from witnesses including that of Dr. Reese T. Jones, Professor of Psychiatry, University of California, San Francisco and that of Dr. Gabriel G. Nahas, [redacted] O.S.E., M.D., Ph. D., Professor of Anesthesiology, Columbia University, New York City,

the Committee also considered the report, "Marijuana and Health," by the Institute of Medicine, U. of California;

the books/"Keep Off the Grass" and "Marijuana: Biological Effects," or excerpts from them. both authored by Dr. [redacted] Nahas;

"Health Consequences of Marijuana Use," by William Pollin, M.D., Director, National Institute of Drug Abuse (written 1980);

a printed interview with Dr. D. Harvey Powelson, of the mental health program of Calaveras County, California, who once termed marijuana "harmless" but who now calls it "Our Most Dangerous Drug," the title of the printed interview;

a pamphlet called "Marijuana - What Parents Need to Know" from the Alaska Council on Prevention of Alcohol and Drug Abuse;

a pamphlet, "Marijuana" by Charlotte Drug Education Center, Inc., Charlotte, North Carolina;

pamphlet, "Marijuana Update," a Readers' Digest reprint of May, 1980;

article, "Marijuana: The Myth of Harmlessness Goes Up in Smoke," by Peggy Mann, a Saturday Evening Post feature, 1980;

article, "The Marijuana Epidemic," by Stuart M. Butler, analyst, The Heritage Foundation, Washinton, D.C.;

booklet, "Report on Adverse Health and Behavioral Consequences of Cannabis Use," World Health Organization, 1981;

an assortment of Drug Abuse Newsletters of 1982, 1983;

article printed in the Congressional Record entitled "Marijuana and Health," the ninth report to the U.S. Congress, by the Secretary, Health and Human Services, (1982);

booklet, "Marijuana Today" by George K. Russell, (1963), and article, "Marijuana Smoking and Its Effects on the Lungs," by Donald P. Tashkin, M.D. and Sidney Cohen, M.D., of the Department of Medicine and Psychiatry, U.C.L.A. School of Medicine, Los Angeles, California.

ATTACHMENT C

Fiscal Note

[redacted]

REQUEST
Bill/Resolution No.: SB 698
Title: "An Act relating to marijuana..."
Sponsor: House Judiciary
Requester:
Date of Request:

FISCAL DETAIL
Agency Affected: Department of Law
Program Category Affected: Administration of Justice
Bud, Program or Subprogram(s) Affected: Prosecution

EXPENDITURES/REVENUES: (Thousands of Dollars)

	FY 84	FY 85	FY 86	FY 87	FY 88	FY 89
OPERATING						
100 PERSONAL SERVICES		143.9	151.1	160.6	170.2	180.5
200 TRAVEL		6.9	6.9	7.3	7.7	8.2
300 CONTRACTUAL		61.1	63.8	41.9	43.7	44.5
400 SUPPLIES		13.1	12.3	12.8	13.6	14.1
500 EQUIPMENT		7.1				
600 LAND & STRUCTURES						
700 GRANTS, CLAIMS						
800 MISCELLANEOUS						
TOTAL OPERATING		235.8	234.5	221.9	235.2	249.3
CAPITAL						
REVENUE						

FUNDING: (Thousands of Dollars)

GENERAL FUND		235.8	234.5	221.9	235.2	249.3
FEDERAL FUNDS						
OTHER						
TOTAL						

POSITIONS:

FULL-TIME		4	4	4	4	4
PART-TIME						
TEMPORARY						

SOURCE OF FUNDS TO OFFSET FISCAL IMPACT OF BILL:

APR 1984
RECEIVED

ANALYSIS: Attach a separate page for analysis

Prepared By: Richard L. Pearce, Director
Division: Administrative Services
Phone: [redacted]
Date: 4/19/84

Approved by Commissioner: Norman C. Gorsuch
Agency: Department of Law
Date: 4/19/84

Distribution (by Agency preparing fiscal note):
- Legislative Finance
- Legislative Sponsor
- Requester
- Office of Management and Budget
- Impacted Agency(ies)

12/1/83

Fiscal Note
Analysis
HB 698

April 18, 1984

HB 698 is a blanket provision which would make possession or use of less than one-half pound of marijuana by anyone a class B misdemeanor. Some of the conduct which this bill would cover (such as use or display of any amount in a public place, possession of any amount while operating a motor vehicle, or possession of more than four ounces of marijuana anywhere) is a class B misdemeanor under existing law. See AS 11.71.060. Some of the conduct which this bill would make a crime (such as delivery of less than one-half ounce or possession of less than one ounce in public) is classified under current law as a "violation", punishable by a fine. See AS 11.71.070. The penalties under current law for other conduct such as delivery of one-half ounce or more, delivery to a minor, or possession of any amount on school grounds would not be altered. Penalties under existing law for these offenses range from A misdemeanor to B felony level. See AS 11.71.030, .040, and .050.

The passage of HB 698 would have fiscal impact on the Department of Law in three general areas: (1) the cost of defending the new law against constitutional challenge; (2) the cost of processing the resulting additional criminal cases; and (3) the cost of educating the public about the new law. These three areas are discussed separately below.

1. Defending the New Law

In 1975 the Alaska Supreme Court in the case of Ravin v. State, 537 P.2d 497 (Alaska 1975), ruled that under Art. I, Sec. 22 of the Alaska Constitution the state could not prohibit possession of marijuana by adults in their own homes for personal use. The court held that the state had not demonstrated the existence of a legitimate state interest which was strong enough to justify the regulation of this conduct.

Since passage of HB 698 would make it a crime for an adult to possess any amount of marijuana anywhere, including in his or her own home, the constitutionality of the new law is certain to be challenged. An appellate court will have to decide whether the state has proved that there is a "compelling state interest" in the prohibition of the use of marijuana which is sufficient to outweigh an individual's right to privacy under the state constitution. It is extremely important, therefore, that the legislature's consideration of this bill include extensive public hearings, debate on the social policy merits of the proposal, and the collection of the results of the most recent scientific, medical, and pharmacological studies regarding the physical, emotional, and social effects of marijuana usage..

In addition to the necessary legislative hearings, evidentiary hearings at the trial court level can be expected when a challenge to the new law is filed. Challenges to the new law will most likely arise in the context of a defendant's pretrial motion to dismiss a criminal prosecution. When responding to such a defense motion, the prosecutor would, in essence, have to convince a court to reverse the ruling in the Ravin case. In order to demonstrate that the result in Ravin is no longer correct, the prosecutor would have to present convincing, scientifically accurate, evidence that the effects of marijuana usage are so injurious to a person's mental and physical health as to justify the legislative decision to totally prohibit use of marijuana by anyone at any time (as opposed to use by minors or use by a person who is operating a motor vehicle--both of which are already prohibited under current law).

The presentation of this convincing evidence will require the prosecution to present expert testimony from authorities who have conducted recent research in this area. Out-of-state witnesses in medical and scientific fields charge a fee for their services. These fees will vary from individual to individual, but are expected to average at least $100 per hour. This would include services for consultation, witness preparation and actual testimony. Costs will be incurred for expert witness

transportation, food and lodging, and other incidental expenses. Additionally, there will be some costs for preparation of exhibits and written reports. To the extent possible, the Department of Law would attempt to present written testimony in situations where it is not feasible to fly a person to Alaska to testify in person. We estimate that a minimum of six expert witnesses will be required to attempt to successfully defend the new law at the trial court level.

Hearings at the trial court level can reasonably be expected to take several days. A substantial commitment of attorney time will be required for scientific and legal research in preparation for the hearings, actual court time, legal briefing, and the preparation of proposed findings of fact. Since prosecutions under the new law will occur statewide, defense challenges may be raised at the same time in different parts of the state. The extensive hearings described above may have to be held in more than one judicial district in the state.

Regardless of which side prevails at the trial court level, the lower court ruling would almost certainly be followed by an appeal. At a minimum, such an appeal (or appeals) would required additional legal research, a thorough review of the record, the drafting of briefs, and oral argument before the

appellate court. Although these appeals would present an increased workload for the criminal division attorneys assigned to appellate work, no additional funding is requested for this aspect of HB 698's fiscal impact.

2. New Criminal Cases

Although some of the conduct included within the scope of HB 698 is already against the law, much behavior which is now classified as a "violation" or which is not now an offense of any sort will become a misdemeanor crime. It is difficult to accurately predict in advance the impact which the passage of HB 698 will have on the criminal justice system.

Some law enforcement officers who work primarily in the drug enforcement area believe that the new law could potentially result in "thousands" of new misdemeanor cases a year. They believe that the bill would cause an increased enforcement effort both in the areas not now covered by existing law and against persons who commit minor offenses which are already against the law. A great number of the new cases would arise from situations where law enforcement officers now commonly discover small amounts of marijuana (as when an officer responds to a domestic disturbance call and sees some marijuana plants in a person's

home, or when a person is arrested for a minor offense and a routine search for weapons reveals some marijuana cigarettes in the person's pocket, for example). Incidents of this sort occur frequently now, but do not generally result in any criminal prosecution for the marijuana possession. Many of these cases are likely to be referred for criminal prosecution if HB 698 becomes law.

Prosecutors generally predict a lesser number of new potential criminal cases under HB 698 than do police. Once the public becomes aware of the new law, people are likely to be more careful about not allowing marijuana or smoking paraphernalia to be exposed in plain view in their homes, for example. Judging from the number of minor marijuana offenses prosecuted prior to the Ravin decision in 1975, prosecutors expect a "few hundred" new criminal cases a year.

Cases which are accepted for prosecution will require attorney time both at trial and in preparation for trial (i.e., preparation of search warrants, response to defense motions, evaluation of results of laboratory analysis, pretrial witness preparation, etc.). To handle screening of the expected case referrals, and to prosecute the additional cases, the criminal division will require the addition of at least one Attorney III