HB

114

Representative Mary Sattler Kapsner
State Capitol • Juneau, Alaska 99801-1182
Phone: (907) 465-4942 • Fax: (907) 465-4589
E-Mail: Representative Mary_Kapsner@legis.state.ak.us

House District 39
Lower Kuskokwim and Upper Bristol Bay

Resources Committee
Fisheries Committee
Regulation Review Committee

Akiachak
Akiak
Aleknagik
Atmautluak
Bethel
Chefornak
Clarks Point
Dillingham
Eek
Ekuk
Ekwok
Goodnews Bay
Kasigluk
Kipnuk
Kolignanek
Kongiganak
Kwethluk
Kwigillingok
Manokotak
Napakiak
Napaskiak
New Stuyahok
Nunapitchuk
Oscarville
Platinum
Portage Creek
Quinhagak
Togiak
Tuntutuliak
Twin Hills

MEMORANDUM

TO: REPRESENTATIVE FRED DYSON
Chairman-HESS Committee

FROM: REPRESENTATIVE MARY KAPSNER

DATE: February 19, 2001

RE: HESS Hearing on HOUSE BILL 114 "An Act related to abuse of inhalants."

I would like to request an initial hearing on House Bill 114, "An Act related to abuse of Inhalants" in the Health, Education & Social Services Committee. I have attached a copy of the bill and my sponsor statement for your review. Additional supportive material will be forthcoming later in the week.

As you may be aware, I introduced this bill last session and it passed both the HESS and Judiciary Committees and was on its way to Finance at session's end. I have reintroduced the bill again and HESS is the first committee assignment. Feel free to contact me or my staff if you have any questions.

Thank you.

22-LS0130\C.3
Luckhaupt
3/14/01

AMENDMENT

OFFERED IN THE HOUSE

TO: HB 114

Page 5, lines 26 - 31:

Delete

"(1) "alcoholic **or inhalant** or drug abuser" means a person who demonstrates increased tolerance to alcohol**, inhalants,** or drugs, who suffers from withdrawal when alcohol**, inhalants,** or drugs are not available, whose habitual lack of self-control concerning the use of alcohol**, inhalants,** or drugs causes significant hazard to the person's health, and who continues to use alcohol**, inhalants,** or drugs despite the adverse consequences;"

Insert

"(1) "alcoholic **or inhalant** or drug abuser" means a person who

(A) demonstrates increased tolerance to alcohol**, inhalants,** or drugs, who suffers from withdrawal when alcohol**, inhalants,** or drugs are not available, whose habitual lack of self-control concerning the use of alcohol**, inhalants,** or drugs causes significant hazard to the person's health, and who continues to use alcohol**, inhalants,** or drugs despite the adverse consequences; **or**

(B) uses inhalants on a more than occasional basis, whose use of inhalants has caused significant adverse consequences to the person's health or whose use of inhalants is likely to cause a significant hazard to the person's life or health, and whose use of inhalants impairs the person's judgment to such a degree that the person continues to use inhalants despite the adverse consequences or hazards;"

22-LS0130\C.2
Luckhaupt
3/13/01

AMENDMENT

OFFERED IN THE HOUSE BY REPRESENTATIVE KAPSNER

TO: HB 114

Page 1, line 1, following "**inhalants**":

Insert "**; and relating to minors under the influence of alcohol, inhalants, or drugs**"

Page 2, following line 3:

Insert a new bill section to read:

"* **Sec. 2.** AS 47.10 is amended by adding a new section to read:

Sec. 47.10.137. Intoxicated minors. (a) A peace officer shall take into protective custody a minor who the peace officer has reasonable cause to believe is under the influence of alcohol, inhalants, or drugs if the minor is not otherwise subject to arrest or detention.

(b) A peace officer taking into protective custody a minor under (a) of this section shall

(1) return the minor to the minor's parent or guardian or, if the minor's parent or guardian is unknown or unavailable, take the child to a relative or to a shelter, program, or facility suitable for the minor;

(2) use the procedures provided in AS 47.37.170 for a person incapacitated by alcohol, inhalants, or drugs if the minor appears to be incapacitated, and the peace officer may use the procedures provided in AS 47.37.170 for an intoxicated person if the minor appears to be intoxicated; in this paragraph, "incapacitated by alcohol, inhalants, or drugs" and "intoxicated person" have the meanings given in AS 47.37.270;

(3) deliver the minor to another suitable location and promptly notify the Department of Health and Social Services of the placement."

Renumber the following bill sections accordingly.

22-LS0130\C.1
Luckhaupt
2/28/01

AMENDMENT

OFFERED IN THE HOUSE

TO: HB 114

Page 1, line 5:

Delete "crime"

Insert "offense"

Page 2, lines 1 – 3:

Delete all material and insert:

"(d) Abuse of inhalants is a violation."

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Sponsor Statement

HOUSE BILL NO. 114
"An Act relating to the abuse of Inhalants"

House Bill 114 targets a problem in Alaska that has been neglected for many years. It will provide public safety officials, medical personnel and the courts leverage to place individuals who use and abuse inhalants into rehabilitation. I introduced HB 114 after listening to the concerns of many providers working with young people and to VPSO's who feel they have no tools to intervene when they see someone huffing.

Although the abuse of inhalants is not a new problem, it is reaching rampant proportions throughout Alaska and among youth across the nation. As of January 1999, twenty-four states have passed laws addressing inhalant problems. These laws vary greatly in content, ranging from sending individuals to treatment to criminalizing the behavior.

One of the problems in forging a direction to deal with inhalant abuse is the lack of appropriate treatment facilities. Most substance abuse treatment programs are geared toward problems of alcohol and drugs. Nationally, there are only two residential treatment facilities designed for inhalant abusers, in Texas and South Dakota. Thanks to the efforts of Senators Frank Murkowski and Ted Stevens, the Yukon Kuskokwim Health Corporation in Southwest Alaska received a grant in 1999 to build an inhalant abuse treatment facility. Construction of the facility is presently underway with completion scheduled for August 2001.

A 1998 survey by the YKHC found that during 1996 and 1997, 161 Alaskan sought treatment for inhalant abuse at drug and alcohol programs. During the same period they found 46 people with a history of inhalant abuse died. A 1993 study by the Indian Health Service in Alaska looked at the cost to society if inhalant abusers are left untreated. That study found that a 19 year old with a chronic history of inhalant abuse and significant brain or organic damage will cost society $1.4 million over a lifetime of treatment, medical care, social services, law enforcement and court costs.

We are fortunate in Alaska to be at a threshold of a new era in addressing inhalant abuse with the coming residential treatment facility. I would hope the legislature takes a pro-active look at ways in which we can raise awareness and address statutory needs to complete a package approach that includes prevention, intervention and treatment.

Thank you for your consideration.

LEGAL SERVICES

DIVISION OF LEGAL AND RESEARCH SERVICES
LEGISLATIVE AFFAIRS AGENCY
STATE OF ALASKA

(907) 465-3867 or 465-2450
FAX (907) 465-2029
Mail Stop 3101

State Capitol
Juneau, Alaska 99801-1182
Deliveries to: 129 6th St., Rm. 329

MEMORANDUM February 22, 2001

SUBJECT: Sectional Summary of HB 114

TO: Representative Mary Kapsner
Attn: Trim Nick

FROM: Gerald P. Luckhaupt
Legislative Counsel

You have requested a sectional summary of the above-described bill. As a preliminary matter, note that a sectional summary of a bill should not be considered an authoritative interpretation of the bill - the bill itself is the best statement of its contents.

Section 1 and 2 of the bill deal with the new crime of abuse of inhalants. Section 1 creates the crime of abuse of inhalants, AS 11.76.200, and specifies the penalty for violation of that section as a class B misdemeanor.[1] This section further provides that a court "suspend the imposition of sentence [SIS], place the defendant on probation under AS 12.55.085, and require the defendant to successfully complete an inhalant abuse treatment program." If the defendant successfully completes the probation the SIS will result in the defendant not having a criminal conviction. Section 2 of the bill amends AS 47.12.030(b) to provide that minors who are accused of violating AS 11.76.200 will not be subject to the jurisdiction of the juvenile court but will be subject to the jurisdiction of the district court like juveniles charged with alcohol, tobacco, traffic, fish and game, parks, and curfew violations.

Sections 3 - 15 of the bill amend the Uniform Alcoholism and Intoxication Treatment Act, AS 47.37 by providing for intervention for those abusing, intoxicated by, or incapacitated by inhalants in the same manner as for those abusing, intoxicated by, or incapacitated by alcohol or drugs.

GPL:glc
01-191.glc

[1] The period of incarceration authorized for a class B misdemeanor may be found at AS 12.55.135. The fine authorized for a class B misdemeanor may be found at AS 12.55.035.

FISCAL NOTE

STATE OF ALASKA
2001 LEGISLATIVE SESSION

Fiscal Note Number:
Bill Version: HB 114
( ) Publish Date:

Revision Date/Time (Note if correction):
Dept. Affected: Health & Social Services
Title: Relating to abuse of inhalants
BRU: Juvenile Justice
Component: Probation Services
Sponsor: Representative Kapsner
Requester: House HES
Component Number: 2134

Expenditures/Revenues (Thousands of Dollars)

Note: Amounts do not include inflation unless otherwise noted below.

OPERATING EXPENDITURES	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007
Personal Services						
Travel						
Contractual						
Supplies						
Equipment						
Land & Structures						
Grants & Claims						
Miscellaneous						
TOTAL OPERATING	***	***	***	***	***	***
CAPITAL EXPENDITURES						
CHANGE IN REVENUES ( )						

FUND SOURCE (Thousands of Dollars)

1002 Federal Receipts						
1003 GF Match						
1004 GF						
1005 GF/Program Receipts						
1037 GF/Mental Health						
Other (Specify Type)						
TOTAL	***	***	***	***	***	***

Estimate of any current year (FY2001) cost: 0.0

Check this box (X) if funding for this bill is included in the Governor's FY 2002 budget proposal:

POSITIONS

Full-time						
Part-time						
Temporary						

ANALYSIS: *(Attach a separate page if necessary)*

***The Division has been unable to obtain any estimates as to the number of juvenile inhalant abusers we might expect to see sentenced to periods of incarceration for violation of this offense. Without an understanding of the extent of the problem, there is no reasonable way to estimate the fiscal impact on the youth facility budgets throughout the state. Because of the possibility of significant neurological impairment associated with inhalant abuse, even a small number of these offenders may tax the resources of our youth facilities. The Division is submitting an indeterminate fiscal note to indicate we believe there would be a fiscal impact, but there are too many unknowns to be able to calculate what that impact might be.

Amending this bill to make inhalant abuse a violation rather than a misdemeanor would negate the concern for the fiscal impact this bill would have on youth detention center services.

Prepared by: George Buhite
Phone 465-2212
Division Juvenile Justice
Date/Time 2/15/01 4:23 PM
Approved by: Elmer A. Lindstrom, Special Assistant
Date 2/22/01 8:41 AM
Agency Department of Health & Social Services

For distribution information, call the Governor's Legislative Office

(Rev 2/7/2001 OMB)

FISCAL NOTE

STATE OF ALASKA
2001 LEGISLATIVE SESSION

Fiscal Note Number:
Bill Version: HB 114
( ) Publish Date:

Revision Date/Time (Note if correction):
Dept. Affected: Health & Social Services
Title: An Act relating to abuse of inhalants
BRU: Alcohol and Drug Abuse Svcs
Component: Alcohol and Drug Abuse Grants
Sponsor: Kapsner
Requester: House HESS
Component Number: 1239

Expenditures/Revenues (Thousands of Dollars)

Note: Amounts do not include inflation unless otherwise noted below.

OPERATING EXPENDITURES	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007
Personal Services						
Travel						
Contractual	75.0	75.0				
Supplies						
Equipment						
Land & Structures						
Grants & Claims	289.0	289.0	289.0	289.0	289.0	289.0
Miscellaneous						
TOTAL OPERATING	**364.0**	**364.0**	**289.0**	**289.0**	**289.0**	**289.0**
CAPITAL EXPENDITURES						
CHANGE IN REVENUES ( )						

FUND SOURCE (Thousands of Dollars)

1002 Federal Receipts						
1003 GF Match						
1004 GF	364.0	364.0	289.0	289.0	289.0	289.0
1005 GF/Program Receipts						
1037 GF/Mental Health						
Other (Specify Type)						
TOTAL	**364.0**	**364.0**	**289.0**	**289.0**	**289.0**	**289.0**

Estimate of any current year (FY2001) cost: 0.0

POSITIONS

Full-time						
Part-time						
Temporary						

ANALYSIS: *(Attach a separate page if necessary)*

If HB 114 is not amended it mandates treatment that is not available in many areas of the state. If not amended it is estimated that no more than 30 adults and 30 juveniles would required to enter treatment and have their sentence suspended in any given year. In a survey of persons in substance abuse treatment in August 1998 they found that 175 (31%) of 550 clients had a history of use of inhalants. It is difficult to determine from this how many might be arrested and sent to treatment in a given year. We feel that the numbers above represent a reasonable estimate.

Based on this number we would estimate a cost of 212.0 a year in added treatment costs. This is based on using intensive outpatient level of care and mandating contact with the person for at least one year. On the next page is the calculation for this cost.

Prepared by: Ernest Turner, Director
Phone 465-2071
Division: Alcoholism and Drug Abuse
Date/Time 2/20/ 01 4:45pm
Approved by: Elmer A. Lindstrom, Special Assistant
Date 2/22/01 8:37 AM
Agency: Department of Health & Social Services

For distribution information, call the Governor's Legislative Office

(Rev 11/2000 OMB)

ANALYSIS: (continued)

In addition, many programs would need specific training for providing this level of care to adult inhalant abusers. The estimated costs would be $75.0 for FY02 and FY03 for training to bring someone with appropriate expertise in both adult and adolescent treatment to Alaska, provide training in several rural sites and cover costs of follow-up visits to reinforce training. This would also leave us with trained persons, a developed curriculum and allow for future training to be done by persons already trained in Alaska.

Phase I Intensive Outpatient 6 weeks	
Assessment	$100
10 Hours intensive outpatient/week @$45	$2,700
Two written reports for courts	$60
Total Phase I costs	$2,860
Phase II Continuing Care 20/weeks	
1 group per week @$20	$400
Five care coordination of 30 min.	$75
Five written reports for courts	$150
Total Phase II costs	$625
Phase III Extended Continuing Care 26 weeks	
1 group every 2 weeks @$20	$260
Six care coordination of 30 min.	$90
Six written reports for courts	$180
Total Phase III costs	$530

Total 12 month costs including indirect costs @20% $4,818

States with Current Inhalant Statutes

Confirmed as of January 1999

Arizona	13-3403—Possession and sale of a vapor releasing substance containing a toxic substance; regulation of sale; exceptions; classification.
Arkansas	5-64-12—Nitrous Oxide-possession, distribution, exemptions.
California	Penal Code. Title 10. Sec 380-1.—Regulates toluene.
Colorado	18-18-412—Abusing toxic vapors-prohibited.
Florida	877.111—Inhalation, ingestion, possession, sale purchase or transfer of harmful chemical substances; penalties.
Hawaii	712-1250—Promoting intoxicating compounds.
Idaho	18-1502B—Possession of inhalants by minors.
Indiana	35-46-6—Glue Sniffing.
Kentucky	217.900—Volatile substance defined-Inhalation unlawful. 217.902—Repackaging volatile substances.
Louisiana	§93.1—Model glue; use of; abuse of toxic vapors; unlawful sales to minors; penalties.
Maine	22§2383-C—Unlawful use or possession of inhalants.
Maryland	27-301—"It is unlawful for any person to deliberately smell or inhale substances or chemicals..."
Massachusetts	270-18— Substances having property off releasing toxic vapors; sale, possession and use; 270-19—Sale of glue or cement to minors; smelling deterrent ingredients; register.
Nebraska	28-419—Inhaling or drinking certain compounds; unlawful. 28-420—Selling and offering for sale certain compounds; use; knowledge of seller; unlawful. 28-421—Act, exceptions. 28-422—Selling or offering for sale certain compounds; register; maintain for one year. 28-423—Inducing or enticing; violation. 28-424—Violations; penalty.

Nevada	454.346—Use or possession with intent to use drug, chemical, poison or organic solvent to induce euphoria or hallucinations unlawful; exception.
New Hampshire	644.5a—Inhaling toxic vapors for effect.
New Jersey	2C:35-10.4—Toxic chemicals.
North Carolina	90-113.8A through 113.14—North Carolina Toxic Vapors Act
Ohio	2925.31—harmful intoxicant 2925.32—nitrous oxide
Oregon	1999 Ch. 229. (HB 3276)—Relating to inhalants; and declaring an emergency.
Rhode Island	Ch. 11-48—Substances releasing toxic vapors.
Texas	Health and Safety Code Chapter 484—Inhalants. Chapter 485—Abusable glues and aerosol paints.
Virginia	18.2-264—Inhaling drugs or other noxious chemical substances or causing, etc., others to do so.
Wisconsin	134.63—Nitrous oxide; restrictions on sales; records of certain sales; labeling. 346.935—Intoxicants in motor vehicles. 941.315—Possession, distribution or delivery of nitrous oxide.

STATE INHALANT LEGISLATION

NOTE: The following information was compiled by the National Conference on State Legislatures and may not be a complete report on legislative efforts.

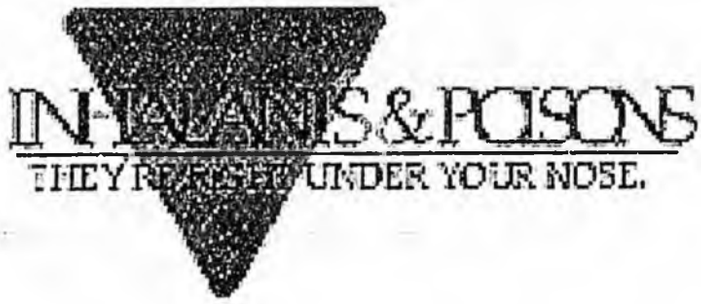
* indicates state which provides a fine, jail time or treatment option for violation of inhalant laws

State	Law Prohibits	Substances Prohibited	Fine	Jail	Treatment
Arizona	sale, transfer, or offer to sell to minor	vapor releasing substance containing toxic substance	*	*	
California	sale, distribution, dispensation, possession to minor	toluene, materials containing toluene, nitrous oxide	*	*	
Colorado	inhaling certain compounds for intoxication	general prohibition of inhalable compounds			
Connecticut	sale, distribution to minor	nitrous oxide, including "whippet kits"	*		
Georgia	general inhalants; also prosecutes inhalants under DUI law	general prohibition of inhalable compounds	*	*	
Florida	inhaling certain compounds for intoxification	general prohibition of inhalable compounds			
Hawaii	knowingly selling tolulol or inhalable compounds to minors	liquid/chemical containing toluol, inhalable substances			
Idaho	possession by minors or use of inhalant for intoxification	aerosol spray, other inhalant	*	*	
Illinois	knowingly sell, offer or deliver to minor	liquid/chemical containing toluol, inhalable substances			
Iowa	sale, distribution or use for the purpose of intoxification	nitrous oxide	*	*	
Kentucky	inhaling certain compounds for intoxification	general prohibition of inhalable compounds			
Louisiana	prohibits sale or transfer of possession to minor	model glue, inhalable toluene substances	*	*	
New Mexico	sale to minors; inhaling or possessing for intoxification	model glue, aerosol spray, & chemicals for intoxication	*	*	*

Maine	inhaling toxic vapors for effect; sale or distribution for purpose of intoxification to minor	general prohibition of inhalable compounds	*		*
Maryland	distribution, instruction to minor; sale or distribution to minor	drugs/noxious substances, including butyl nitrite & butane	*	*	
Massachusetts	retailers must require ID for sale and maintain register of minors which is available for police inspection; inhalants are required to have noxious deterrents against intoxification	glue or cement	*	*	
Michigan	inhaling certain compounds for intoxification	general prohibition of inhalable compounds			
Minnesota	sale to minors; use and possession for intoxification; businesses must post signs stating it is illegal to sell butane/butane lighters to minors	general inhalable compounds, butane/butane lighters			
Mississippi	inhaling certain compounds for intoxification	general prohibition of inhalable compounds			
Nebraska	nhaling certain compounds for intoxification; retailers must maintain registry of sale	general inhalable compounds			
New Hampshire	inhaling certain compounds for intoxification	toxic vapors, not including anesthesia			*
New Jersey	sell or offer to sell to minors	product containing chlorofluorocarbon that is used in refrigerant			
Nevada	sale or offer to give to minors	aerosol paint, glue, cement containing toluene	*		
North Carolina	inhaling certain compounds for intoxification	general prohibition of inhalable compounds			
North Dakota	inhaling certain compounds for intoxification	general prohibition of inhalable compounds			
Ohio	inhaling certain compounds for intoxification	general prohibition of inhalable compounds			

Oklahoma	inhaling certain compounds for intoxification	general prohibition of inhalable compounds		
Oregon	inhaling certain compounds for intoxification	general prohibition of inhalable compounds		
Pennsylvania	inhaling certain compounds for intoxification	general prohibition of inhalable compounds; butane/canisters		
Rhode Island	inhaling certain compounds for intoxification	general prohibition of inhalable compounds		
South Carolina	inhaling certain compounds for intoxification	general prohibition of inhalable compounds		
South Dakota	inhaling certain compounds for intoxification	general prohibition of inhalable compounds		
Tennessee	inhaling certain compounds for intoxification	general prohibition of inhalable compounds		
Texas	possess, sell or buy; businesses required to post warning signage & pay license fees designated for prevention fund	abusable volatile chemicals	*	*
Utah	inhaling certain compounds for intoxification	general prohibition of inhalable compounds		
Vermont	inhaling fumes for effect	certain hazardous inhalants, glues	*	
Virginia	inhaling certain compounds for intoxification	general prohibition of inhalable compounds		

HOME PAGE



Inhalants FACT SHEET
February 20, 2001

- Inhalants are not drugs. They are toxic chemicals that when used inappropriately, such as by sniffing or "huffing" the vapors, can cause toxic effects, similar to the "high" obtained with drugs.
- Inhalants can kill the very first time they are used. Death is usually from heart failure or suffocation.
- Inhalant highs are the result of intensive penetration of toxic chemicals into the brain tissue, where they are capable of causing irreversible damage.
- In addition to brain, liver, lung and bone marrow damage, there is evidence that chronic abuse of some inhalants causes chromosome and fetal damage.
- Inhalants are the fourth most abused substance after alcohol, tobacco, and marijuana among high school students.
- A 1999 nationwide survey of students indicates that 19.5% of eighth graders have used inhalants compared to 22% who have used marijuana/hashish.
- However, there are Alaska communities where it is reported that up to 90% of the elementary school students have tried or are using inhalants.
- Chronic inhalant users can suffer severe and permanent brain damage; some die the first time they try it; other possible risks include loss of consciousness and irreversible damage to the liver, kidneys and bone marrow.
- Inhalants are often a "gateway" to the abuse of other illicit substances. 70% of one group of substance abusers, in treatment, indicated they had started with inhalants and 50% of those indicated they would go back to inhalants (primarily gas) if alcohol was not available.
- More than 1,400 common, useful and legal household, office and classroom products can be used to "get high".
- Every year kids die from inhalant use, but many parents and educators remain ignorant of this silent epidemic.
- Because the chemicals in inhalants enter the lungs in such high concentrations, they have a more formidable toxic profile than other types of abused drugs.
- Inhalant treatment is significantly more complex than most drug abuse treatment. The toxic chemicals remain in the body tissues for extended periods of time, resulting in the need for a four to six week period of detoxification, prior to actual intensive treatment having much positive effect.
- Youth with a history of chronic inhalant use have strikingly high rates of relapse. Because of the difficult problems associated with inhalant abuse treatment, these youth are often excluded from some drug abuse programs.
- Chronic inhalant users may suffer withdrawal symptoms, including: hand tremors, chronic headaches, nervousness, anxiety and excessive sweating.

National Inhalant Prevention Coalition
2904 Kerby Lane, Austin, Texas 78703 ▼ phone: 800.269.4237 ▼ fax: 512.477.3932 ▼ e-mail: nipc@io.com

Signs of Use	*Harmful Effects*
There is a common link between inhalant abuse and problems in school – failing grades, chronic absences and general apathy. Other signs include the following:	Potential long-term effects of inhalant use include:
▼ Paint or stains on body, clothing, rags or bags ▼ Spots or sores around the mouth ▼ Red or runny eyes or nose ▼ Chemical breath odor ▼ Drunk, dazed or dizzy appearance ▼ Nausea, loss of appetite ▼ Anxiety, excitability, irritability ▼ Restlessness or unexplained moodiness and anger outbursts ▼ Missing abusable household items ▼ Slurred or disoriented speech	▼ Short-term memory loss ▼ Hearing loss ▼ Limb spasms ▼ Permanent brain damage ▼ Bone marrow damage ▼ Liver and kidney damage ▼ Possible fetal effects similar to fetal alcohol syndrome ▼ Intoxication ▼ Death
Typical Profile of an Inhalant Abuser	*RESOURCES*
There is no typical profile of an inhalant abuser. Sniffers and huffers are represented by both sexes and all socioeconomic groups throughout the country and Alaska. It is not unusual to see elementary and middle-school age youth involved with inhalant abuse. Although often typified as a "rural" problem, the misuse of inhalable products, besides gas, is, unfortunately, very common in schools and homes throughout both urban and rural Alaska.	Local Substance Abuse Programs Local Community Mental Health Services Programs Yukon-Kuskokwim Health Corporation Inhalant Intervention Project, Bethel, Alaska - Jim Henkelman, Statewide Outreach Coordinator - Toll Free: 866-HUFFING [483-3464] - Or: 907-230-6693 National Inhalant Prevention Coalition 1-800-269-4237, or on the World Wide Web at: http://www.inhalants.org National Drug and Alcohol Treatment Referral Service – 1-800-662-HELP National Clearinghouse for Alcohol and Drug Information – 1-800-729-6686 http://www.health.org

Inhalant Abuse in Alaska
Fast Facts

- The Division on Alcoholism and Drug Abuse convened an Inhalant Abuse Steering Committee March 12, 1998. The Committee was composed of representatives from, The Alaska Rural and Native Drug and Alcohol Programs (ARANDAP), the Substance Abuse Directors Association (SADA), the Yukon Kuskokwim Health Corporation, the Advisory Board on Alcoholism and Drug Abuse, the Department of Education, and the Division of Alcoholism and Drug Abuse. The Committee submitted its Preliminary Report and Recommendations, October 30, 1998.

- Potential data sources were identified, including The Alaska Trauma Registry, Vital Statistics-Death Certificates, the Youth Risk Behavior Survey, and ADA's Management Information System - Treatment Client Admission data. Additionally, data was sought from the Tribal Courts and the Youth Courts within the State of Alaska. All data sources had limitations.

- The Alaska Trauma Registry collects information on all injuries resulting in admission to an Alaska hospital. Therefore it does not include patients stabilized without hospitalization or those served by clinics. The data goes back to 1991. However, they only began collecting poisoning data as of July 1993. For the time period July 1993 – December 1996 for people under the age of 20, only two cases were found. They were, one 12-year-old sniffing gas in 1993, and one 15-year-old huffing gas with friends in 1995.

- Vital Statistics data from Death Certificates indicated 9 deaths attributable to inhalants in the past ten years. Age at time of death ranged from 12 to 62 years. The major limitation of the Death Certificate data is the manner in which deaths are coded. For example if someone inhaled gasoline while in a boat, got high, fell overboard, and drowned, it would be coded as a drowning accident.

- The Youth Risk Behavior Survey (YRBS) for 1995 indicates that 22.2% of high school students indicated that they had ever sniffed glue, breathed the contents of spray cans or inhaled paints or sprays to get high, as compared to 20.3% nationally. Middle School (7-8th grade) students surveyed indicated that 19.6% of students reported ever using inhalants.

- Client Treatment Admission data for the past six years was reviewed for primary, secondary, and tertiary problem. The data for FY 98 indicates that 46 admissions had inhalants as a primary problem, 18 as a secondary problem, and 34 as a tertiary problem upon admission to treatment. The major limitation of this Treatment Admission data is that up until July 1998 only the Primary Problem data field was required. Up until that time a secondary or tertiary problem with inhalants might not have been indicated.

- To supplement the existing data, the Steering Committee designed two separate survey instruments, one for youth and one for adults. The protocol called for the survey to be

distributed to all division funded treatment programs for administration to all active clients during one seven day period. The week selected (by convenience) was August 9-15, 1998. This was a "snap shot" sample, which can be compared to data gathered in the future. From the distribution of the surveys, 550 adult and 91 youth responses were captured, representing better than 80% of active clients during the survey week.

- Of the 550 adults responding (age 18 and above), 175 (31.8%) said they had used an inhalant at some time. Of those who had said yes to use, 16 (9.1%) reported having used an inhalant within the past 12 months. The youngest reported age of use was four and the oldest reported age of use was 61. The average number of years using an inhalant reported was 5.8, with a range of using from less than 1 year to using inhalants for 28 years. Also, of the adults who reported having used and inhalant (175) at some point, only 41 (23.4%) reported using only one or two times. Leaving 134 (76.6%) with a reported history of use beyond experimentation.

- Of the 91 youth (age 17 and below) responding, 48 (52.7%) said they had used an inhalant at some time. Of those who had said yes to use, 29 (60.4%) reported having used an inhalant within the past 12 months. The youngest reported age of use was eight and the oldest reported age of use was 17. Of all those who responded to the survey (whether answering yes or no to use) 67.8% reported having friends who used inhalants, and 32.2% reported having friends who were experiencing problems related to inhalant use.

- July 1, 1989 the powers and duties of the Division of Alcoholism and Drug Abuse were extended to include programs and activities relating to the misuse of hazardous volatile substances by inhalant abusers. This was done through an amendment to Title 47. Since that time, the Division has funded three public information campaigns designed specifically to educate parents and children about the harmful effects of inhalants.

- The Division does not fund any treatment programs that address inhalant abusers only. Several of the treatment programs however, have internal expertise for this population and address these client needs in the larger milieu. There are only two specialized treatment programs in the nation, both of which were initially federally funded as demonstration projects. One is for adults (Texas) and the other is for adolescents (South Dakota).

- The Steering Committee had four recommendations addressing the need for good data upon which to make better-informed decisions.

The prevention recommendations included:

- In partnership with the Department of Education, local school districts, the Alaska Association of School Boards, SADA, and ARANDAP support the implementation of age appropriate education and skill building curricula for preschool and elementary students.

- Support initiatives that educate parents and enhance local communities' capacity for local problem solving.

- Develop and distribute educational materials for merchants, including strategies on product placement of commonly abused products.

- In partnership with the Department of Public Safety, support the implementation of training for Village Public Safety Officer's and Alaska State Troopers on the signs and symptoms of inhalant use and on reporting of use in investigations where not currently included, such as accidents and drowning.

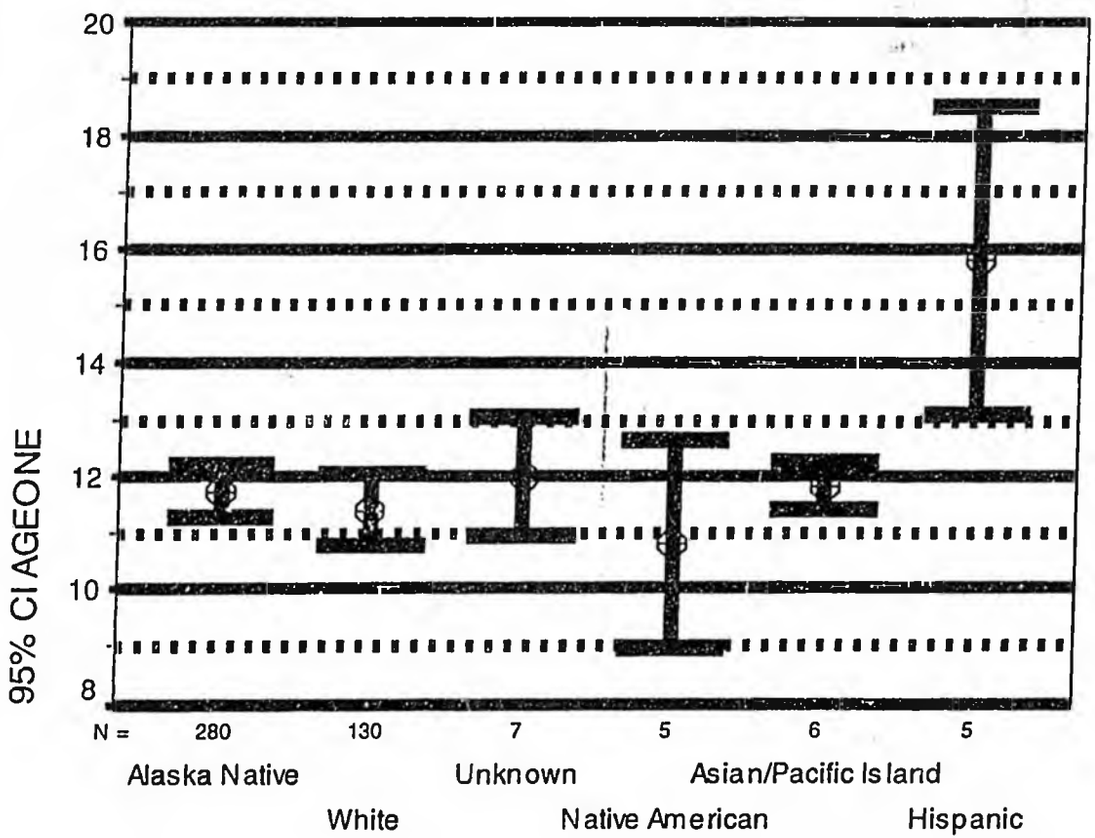
In regard to treatment there were two recommendations:

- Support the development and dissemination of in-service training materials on inhalants and inhalant abuse for clinical and diagnostic use at the regional and local program level.

- Enhance the knowledge and skill level of current practitioners (both prevention and treatment) through the inclusion of inhalant abuse training at statewide training events.

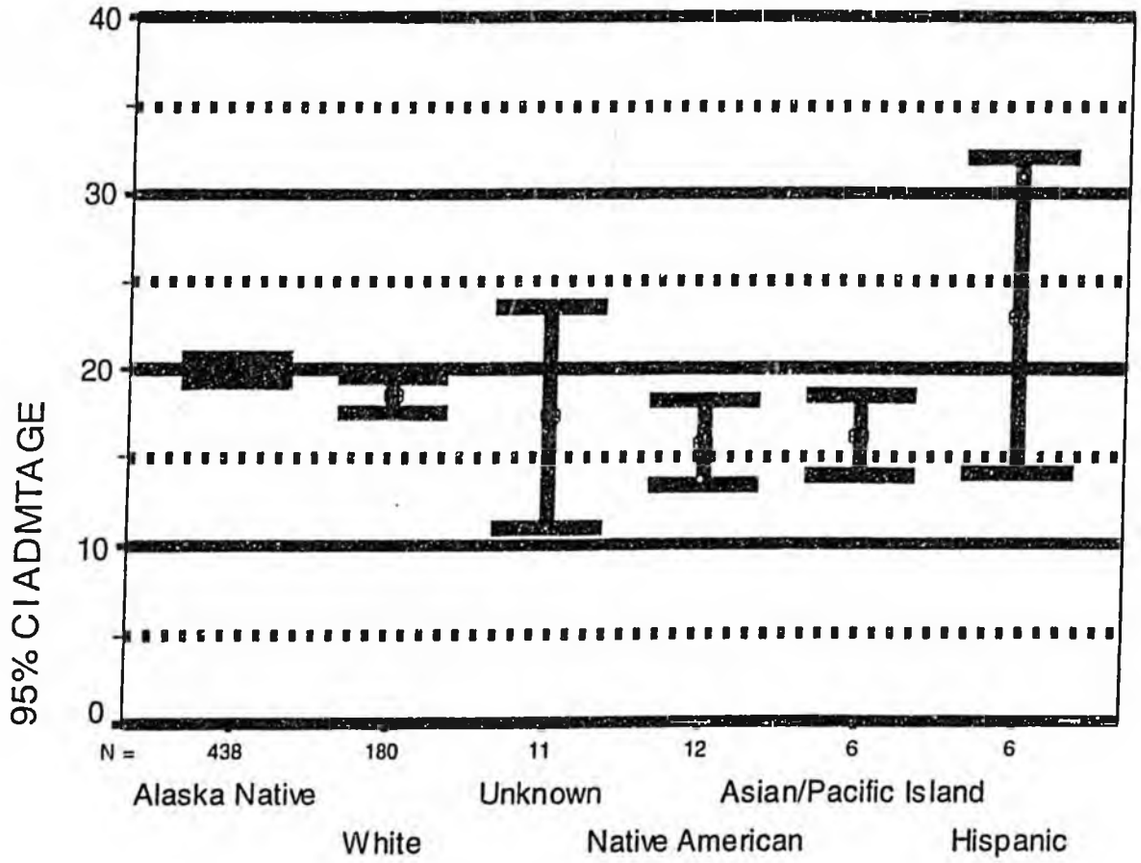
The Steering Committee is scheduled to reconvene in the Spring of 2000 to review the recommendations and progress made.

Inhalant Abuse: Average Age of First Use - Alaska
MIS 1988-1999

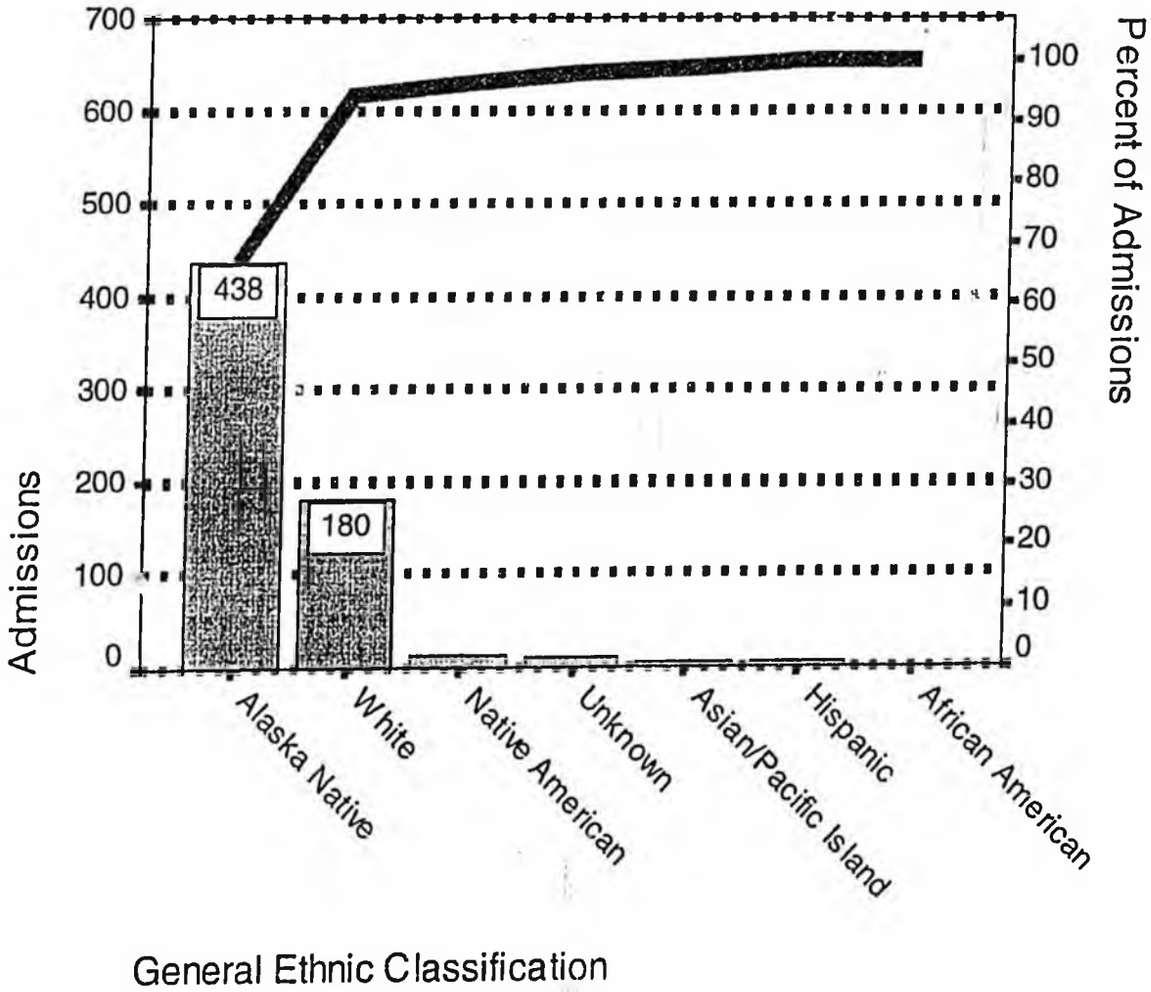


General Ethnic Classification

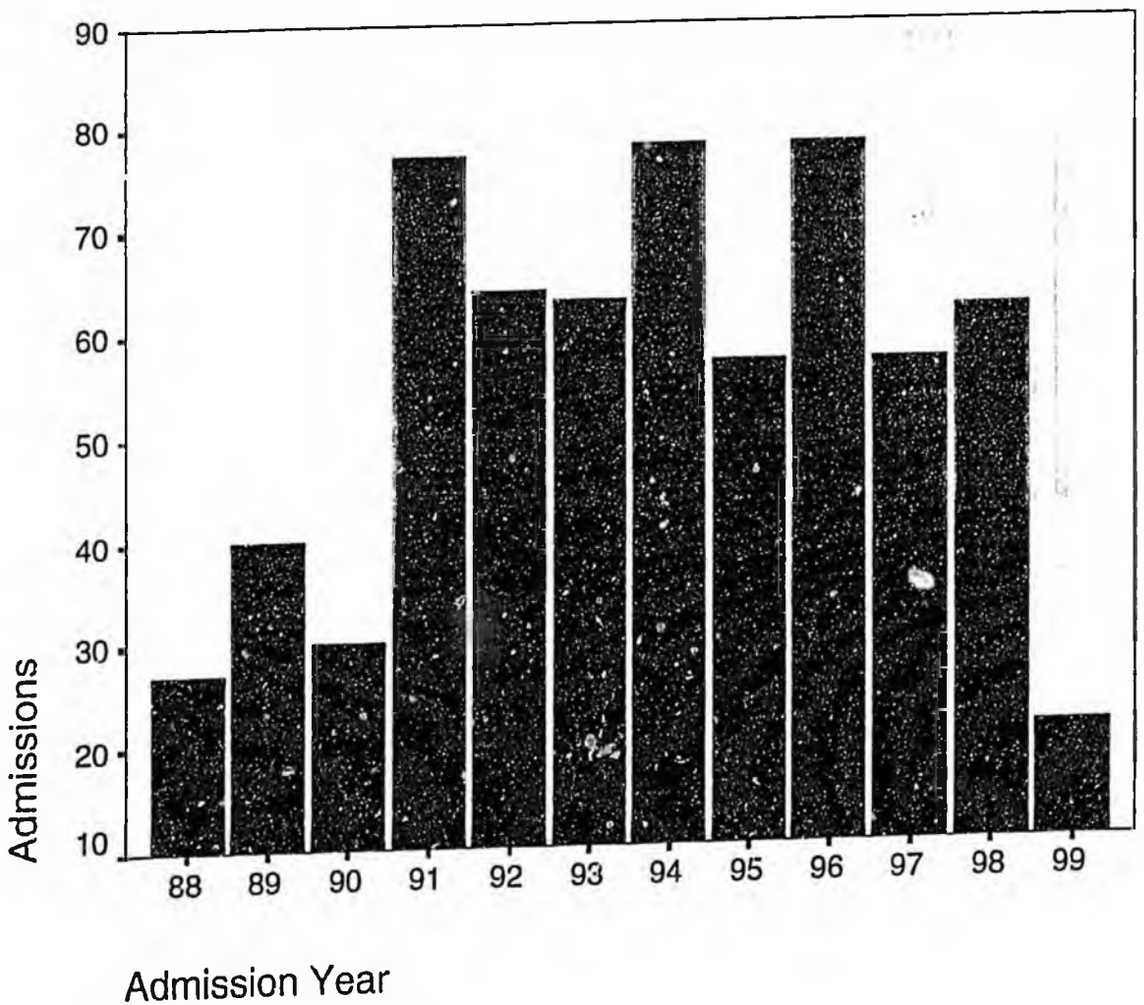
Inhalant Abuse: Average Age at Admission - Alaska
MIS 1988-1999



Inhalant Abuse: Frequency of Admissions - Alaska
MIS 1988-1999



Inhalant Abuse: Total Admissions Per Year - Alaska
MIS 1998-1999



Causes and Consequences of Inhalant Use

The question of what is a cause and what is an effect is a major problem when looking at substance use behavior and it becomes more of a problem with inhalant use. A couple of examples will illustrate this. Inhalant usersare known to have poor academic performance (Liu & Maxwell 1995; Frank et al. 1988). Does this poor performance lead to frustration, problems in school and then the use of inhalants? Or, does inhalant use interfere with cognitive functioning and thus poor school performance? Another major question has to do with neurological damage. It is commonly held that inhalant users incur such damage. However, there are few, if any, studies which address the question of whether some, or all, of this damage may have occurred prior to the use of inhalants. It is possible that neurologic damage prior to the use of inhalants may lead to adjustment problems within the family, or at school, thus priming the individual for future inhalant use.

While the search for specific, temporal "cause and effect" relationships may be useful at some point, it may be better to consider the characteristics of inhalant users as interactive. For example, a child from a dysfunctional family may be prone to inhalant use, but it also is likely that the use of inhalants only increases that family dysfunction. Resolution of the problem involves addressing both the family issues and the inhalant use. Appendix A lists the various interactive causes, correlates and consequences of inhalant use that have been identified.

ORIGINS OF SUBSTANCE USE

Introduction. These are the eight prime factors behind substance abuse (Lettieri 1989): (1) personality deficiency; (2) disruptive environment; (3) adaptive difficulties; (4) peer pressure; (5) stages of use; (6) self-rejecting, self-derogating attitudes; (7) ego deficits and impaired coping strategies; and (8) stress and tension reduction.

There are several conditions that increase susceptibility to inhalant abuse (Oetting et al. 1988): age; gender; ethnicity; community factors; family features; deviance; school adjustment; social adjustment; education problems; emotional problems; and, most importantly, peer influence. Although many factors can affect youth susceptibility to inhalant use, researchers stress that the peer group is almost always one of them. Best friends or fellow gang members form a drug-using peer cluster in which they share their beliefs and ideas, support the rationale for drug use, and decide who will use, how much, and when. There may also be a cultural model for the use of drugs which are inhaled (Dworkin & Stephens 1980; Trotter et al. in press); for example, the well-knit bonds in inhalant-using Mexican and Brazilian street children may be due more to cultural rather than peer factors.

The occurrence of learning disorders are disproportionately high among inhalant-abusing youth (Barratt 1990). The relatively low verbal IQ's of inhalant-using youth can be worsened by families that are typically unstable or unavailable to help children learn to overcome their reading and talking difficulties (Barratt1990). As a result, these youth do not adjust well to school, are more deviant, and thus are more likely to drop out and use inhalants.

Family. One of the more frequent research findings is that inhalant users suffer from serious family dysfunction. They are more likely to come from broken homes, from families with alcohol and/or drug problems, and from families that are marked by conflict and discord. Nearly every study that evaluated family structure found that inhalant users were more likely to come from homes where the primary family was not intact (Albaugh & Albaugh 1979; Berriel-Gonzalez et al. 1978; Carlini-Cotrim & Carlini 1988; Crites & Schuckit 1979; Guitierrez et al. 1978; Jacobs & Ghodse 1988; Leal et al. 1978; Massengale et al. 1963; Nurcombe et al. 1970; Schottstaedt & Bjork 1977; Zur & Yule 1990). In the few

reports where there were no differences in intact family structure between inhalant users and others, the users were relatively young and both users and non-users were from groups with serious socioeconomic problems.

Inhalant users are more likely to come from broken homes, from families with alcohol and/or drug problems, and from families that are marked by conflict and discord.

Family problems also show up in other ways. A number of studies indicate that families of inhalant users may be marked by discord, aggression and/or hostility (Berriel-Gonzalez et al. 1978; Comstock 1978; Crites & Schuckit 1979; DeBarona & Simpson 1984; Gilbert 1983; Korman et al. 1980; Matthews & Korman 1981; Fredlund 1994). When family drug or alcohol use was assessed, the families of inhalant users were more likely to be substance-involved (Albaugh & Albaugh 1979; Bachrach & Sandler 1985; Berriel- Gonzales et al. 1978; Carlini-Cotrim & Carlini 1988; Crites & Schuckit 1979; Guitierrez et al. 1978; Smart et al. 1972; Smith, Joe & Simpson 1991; Stybel et al. 1976). Inhalant users with drug-using families had used more types of drugs, perceived their friends as having a more favorable attitude toward drug use, had experienced more poverty, and were more likely to have disrupted families as well as parents who had been arrested (Bachrach and Sandler 1985).

Opportunity. Although inhalant users almost uniformly experience family problems such as alcoholism, drug use, and broken families, all of which should negatively influence socioeconomic status (SES), studies do not show large and consistent differences in SES. The lack of consistent findings in this area may be because measures of SES tend to be somewhat unreliable. It is more likely, however, that the difficulty lies in study comparisons: really low SES groups may be underrepresented in population surveys or in school-based surveys, and therefore these studies may miss the groups lowest in SES and, possibly, highest in inhalant use. Inhalant users themselves often show problems with employment (Berriel-Gonzalez et al. 1978; Comstock 1978; Korman et al. 1980; Fredlund 1994).

School. Inhalant users also have serious problems in school. Inhalant users seem to disappear from school-based surveys beginning with the eighth grade (Beauvais 1990). Research results indicate that these students drop out. When compared with either non-users or with users of other drugs, inhalant users tend to have greater difficulty in school. They are more likely to have high absenteeism, to have been suspended, to drop out or have been expelled, and to have poor academic performance and lower grades (Altenkirch & Kindermann 1986; Bachrach & Sandler 1985; Beauvais et al. 1996; Carlini-Cotrim & Carlini 1988; Coulehan et al. 1983; Jacobs & Ghodse 1988; Matthews & Korman 1981; Reed & May 1984; Carlini-Cotrim & Carlini 1988; Coulehan et al. 1983; De Barona & Simpson 1984; Korman et al. 1980; Liu & Maxwell 1995; Matthews & Korman 1981; Wingert & Fifield 1985).

Deviance and Delinquency. As might be expected, since inhalant users have trouble adjusting to work and to school, they also have trouble adjusting to society in general. Even among other drug users, inhalant users stand out as deviant.

Inhalant users seem to be more likely to be involved with other drugs. Although there are those who

prefer inhalants, the studies that have looked at a range of drug use often find that inhalant users are heavily involved with other drugs as well (Jacobs & Ghodse 1988; Meta & Andrew 1988; Carlini-Cotrim & Carlini 1988; Compton et al. 1994; Dinwiddie et al. 1987; DeBarona & Simpson 1984; Ellison 1964; Shurtz et al. 1994; Sokol & Robinson 1963). This heavier involvement with drugs in general may help to explain some other findings. Among the inhalant users in a Texas youth program, chronic sniffers had been arrested an average of 9 times, 40 times more often than non-drug users, and twice as often as occasional sniffers (Stybel et al. 1976). In a study of Hispanic youth, two-thirds of the inhalant users who were patients in a treatment program had been arrested compared with only 3 percent of a control group (Berriel- Gonzalez et al. 1978). Among Hispanic youth in Texas drug prevention programs, inhalant users were more likely to have been stopped and questioned by the police, to have been arrested, and to be on probation (DeBarona & Simpson 1984).

INHALANT USE CORRELATES

In several ways the research on inhalant use is remarkable. First, early research, prior to 1975, and research completed since then are essentially consistent and lead to the same conclusions about inhalant users. Considering that drug use has changed radically over this time span, differences in findings over time might be expected. Instead, the recent research has only expanded on and amplified earlier conclusions. Second, the research is remarkably consistent; within a psychosocial area, the studies show high agreement. Third, the research results lead to similar conclusions regardless of age of the study population: inhalant users are found among the subjects who have the fewest social resources at any age and in any group. Fourth, results are consistent across cultures. Research results from four continents and, within the United States, from a number of different cultural contexts, are fundamentally in agreement.

The most general conclusion is that inhalant users are likely to be marginal in society. Inhalant use is highest in areas of poverty, prejudice, lack of opportunity, and dysfunctional family environment. Youth who are failing in school, showing lack of ability to meet the requirements of that environment, are also among those most susceptible to inhalant use. Inhalant users have friends who are also marginal; they are likely to be involved with inhalants, since most inhalant use is a group activity. Those who do move on to solitary use, however, are

> who do move on to solitary use, however, are probably the ones with the most problems. With all these social problems, it is not surprising to find that inhalant users are also likely to have problems with school authorities, to be involved in criminal behaviors, and to suffer from emotional distress.
>
> -- E. R. Oetting, Ph.D.

Inhalant users are also likely to get into trouble with the law earlier than users of other drugs. Among adolescent delinquents in London, on the average, the first arrest of inhalant users occurred about a year and a half before the first arrest of users of other drugs (Jacobs & Ghodse 1988). Inhalant using delinquents from a city in the southwestern United States, when compared with other delinquents, had been arrested almost 3 times as often, were arrested more often for the more serious crimes, and the age of first arrest was lower (Reed and May 1984).

Psychological Characteristics. The picture thus far is that inhalant users are a group with serious social and societal problems. Early studies suggested that inhalant users might suffer from greater emotional distress. Case studies, for example, suggested that inhalant users might be anxious and depressed (Weise et al. 1973). Inhalant users have higher scores on the Taylor Manifest Anxiety Scale, have been treated more often for emotional problems, and are more alienated (Fejer & Smart 1973; Smart et al. 1972). More adolescent delinquents who used inhalants are depressed than adolescent non-inhalant users who used other drugs (Jacobs & Ghodse 1988). There is some evidence that inhalant users are lower in self-esteem. One study found lower self esteem and satisfaction with social relationships (De Barona & Simpson 1984). Another found inhalant users were lower in variables that would logically relate to self-esteem (Annis et al. 1971).

Inhalant users do seem to suffer from greater emotional distress, and there are hints that some inhalant users may indeed have serious personality disorders (Dinwiddie et al. 1991; Swadi 1996). A long-standing pattern of drug use alone, particularly when accompanied by other deviant behaviors such as with inhalant users, could lead to a diagnosis of personality disorder or antisocial personality disorder. An adolescent reaction to the family problems that are often associated with inhalant use (broken families, family hostility, and aggression) could easily lead to a diagnosis of adjustment disorder in an adolescent, another diagnosis that has been applied to inhalant users in some studies. The signs of emotional distress and the behaviors of inhalant users could equally be simply an outcome of the social and family problems and social environment of the inhalant user, and not a result of personal psychopathology.

Peer Drug Involvement. One stereotype of the heavy inhalant user is that of the social isolate or "loner." Research reports, however, are highly consistent in describing most inhalant use as a group activity. In an early report on inhalant-using youth in Texas, about three-fourths of inhalant use occurred with other youth (Stybel et al. 1976). Among London delinquents, 75 percent of users inhaled with friends (Jacobs & Ghodse 1988). Among adolescent users in Northern Ireland, nearly 80 percent inhaled with friends (Lockart & Lennox 1983). More than 80 percent of Brazilian "street kids" used with their friends (Carlini-Cotrim & Carlini 1988). Among Native-American children in a boarding school, sniffing was typically done in a group (Schottstaedt & Bjork 1977). Among poor Hispanic youth, 90 percent used with their friends (Guitierrez et al. 1978).

The kinds of friends that inhalant users have may be an important factor in their inhalant use. Inhalant users may have a narrower group of friends, with higher deviance among them. While family sanctions against inhalant use tend to be high, even in the families of inhalant-using youth, sanctions against inhalant use by peers are much lower (Bachrach & Sandler 1985; Beauvais et al. 1985). Chronic inhalant users in Texas spent more time with their friends and their friends were more deviant (DeBarona & Simpson 1984). Friends of inhalant users may use more drugs (Mata & Andrew 1988), and the friends of inhalant users are also likely to be using inhalants (Bachrach & Sandler 1985; Oetting et al. 1988; Stephens et al. 1978).

In general, more than three-fourths of inhalant use is probably with friends. This leaves a considerable gap, however, showing that a significant amount of inhalant use does occur when the user is alone. From general experience of those working with inhalant users, solitary users seem likely to be more disturbed and have more problems. Only one study compared those who use alone with those who do not, and it indicated that there was more psychopathology in those who used alone (Guitierrez et al. 1978).

In general, more than three-fourths of inhalant use is probably with friends.

Adult patterns of use are less well documented. From the descriptions available, adult use is probably more social than that of adolescents. The milieu of use is typically that of a stereotypic "skid row". Groups of adults will share resources, share inhalants and engage in prolonged binges lasting several days. These bouts are usually marked by sexual promiscuity, poor nutritional intake and the danger of exposure. Alcohol will be used and shared when available. Fredlund (1994) found among adult Kickapoos poverty, low educational attainment, cultural distinctiveness and cultural isolation, as well as physical health and safety problems for these adults and their children.

Culture. The location of "hot spots" of inhalant abuse in Hispanic barrios and on Native American reservations suggests the possibility of cultural influences. Studies that show differences in drug use rate related to ethnicity usually assume that the problems are occurring because youth are caught between two cultures (Gilbert 1983; Guitierrez et al. 1978; Nurcombe et al. 1970). There are, however, almost no actual studies of the cultural identification of minority youth and how that relates to inhalant use. When such studies are conducted, they should carefully control for socioeconomic status. Many studies have not done so and wrongly conclude that certain cultural beliefs and values lead to substance abuse when the real cause is actually socioeconomic.

The most serious levels of inhalant use may occur in specific drug-oriented subcultures. Perhaps the most extreme example of a subculture is reported in a study of Mexico City "street kids" who essentially severed all ties with their families and formed their own subculture, probably to replace the family (Leal et al. 1978). Another example is among the adult members of the Kickapoo people living in Eagle Pass, Texas (Fredlund 1994).

REASONS FOR USE

When inhalant users are asked why they use, some common themes are noted: (1) desired euphoric effects ("it feels good"); (2) easy availability; (3) low expense; (4) possession is not clearly illegal (avoidance of legal hassles); (5) convenient packaging; (6) gives fast and multiple highs (which is particularly attractive to young children who want quick gratification); (7) adolescent expression or rebellion; (8) easier to hide from or explain to parents than alcohol or marijuana; (9) alleviates stress;

and (10) peers approve of or insist on use, which enhances peer respect because use is "cool."

Discerning the link between awareness and behaviors is a complex problem, and is com- pounded by the drug user's frequent inability to fully recognize or verbalize motives for drug use.

BEHAVIORAL CUES

Many behavioral cues present in a drug-use setting can trigger continued drug use. These cues are important indicators for treatment and prevention regimens. The following are among the most common: time of day; day of week; a certain person; smell; taste; a particular street, neighborhood, house or building; an emotional feeling (anger, loneliness, depression, sadness, boredom, hurt feelings); a social gathering or a group of people; a memory (good or bad); success or failure (some take drugs to celebrate, others to forget); alcohol and other drug use (use of one drug may disinhibit the user and thus encourage other or continued drug use).

ADOLESCENT REBELLION

The root problem of inhalant abuse may have more to do with normal stages of adolescent development and adolescent rebellion than with inhalants per se. Youth may like inhalants because they shock, confuse and disturb their parents (Gregory 1986). These youth could merely be acting out their normal stages of adolescent rebellion, a period in which youth test the boundaries of autonomy and independence versus dependence. Inhalant use may also be a way to get parental attention. In this regard, inhalant abuse may be more a problem of adolescence than of drug abuse (Duncan 1986).

MORTALITY

Although toxic drug effects can and do directly cause death, deaths among inhalant users are also indirectly related to use. Death appears in at least five ways: (1) asphyxia (solvent gases can significantly limit available oxygen in the air, causing asphyxiation); (2) suffocation (typically seen with inhalant users who use bags); (3) choking on vomitus; (4) careless and dangerous behaviors in potentially dangerous settings (e.g. explosions & fire); and (5) sudden sniffing death syndrome most often from cardiac arrest (Tenenbein 1990).

In a San Antonio study of inhalant deaths, the most prevalent mode of death was suicide (28 percent) (Garriott 1990). A large majority of inhalant suicides hung themselves (91 percent) in contrast to the relatively low use of this method of suicide by non-inhalant users (18 percent). In addition, the study found that only a small percentage of the inhalant-user deaths (18 percent) were due to inhalant-induced cardiac arrhythmias. Overall, 77 percent of deaths of inhalant users were by violent modes (suicide, homicide and accident), rather than as direct consequences of drug toxicities.

Another study (Maxwell 1994) found persons who died of inhalants in Texas in 1990- 1993 were male (94 percent), Anglo (90 percent), and average age was 26. Close to half of the deaths each year involved freon and the occupations of decedents included air conditioning technicians, engineering technicians and pipefitters.

INHALANT USE/VIOLENT DEATH

The Bexar County Medical Examiner's Office has investigated all cases of death related to inhalant abuse occurring during a recent 6-year period in Bexar County, Texas. Thirty-nine cases had inhalant chemicals detected by screening of blood or other suitable specimens, and were initially identified by circumstances suggesting inhalant abuse, external physical signs at autopsy, or by toxicological screening of high risk deaths. Although few deaths were found to be directly due to inhalant toxicity, a striking correlation was made relating inhalants with violent death. The most prevalent manner of death was suicide (28 percent of cases) fol- lowed by accident (26 percent), homicide (23 percent), and inhalant-induced death (18 percent). By far, the most predominant inhalant agents used were compouonds containing toluene (32 cases, representing 82 percent), although toluene was considered the cause of death in only one instance. The mean toluene concentration in blood in 32 cases was 3.78 mg/L. All other inhalants (trichloroethane/trichloroethylene, nitrous oxide, gasoline and freon 12) were detected in only seven of the cases. The high rate of suicide and violent death in these inhalant abusers while under the influence of the chemicals is suggestive of neurotoxicity.

-- James C. Garriott, Ph.D., D-ABFT

Classifying the Inhalant User & Abuser Table of Contents Effects of Inhalant Use

EFFECTS OF INHALANT USE

The reports from most inhalant users indicate that the perceived ffects mimic the intoxication produced by alcohol. The initial effects are lightheadedness, tingling sensations, agitation and a sense of euphoric exhilaration. Further, there is a sense of well-being and power. From these perceptions, one would think that inhalants are stimulants, but prolonged use, as with alcohol, demonstrates that the primary action is one of a physiological depressant. Later effects include dizziness, blurred vision, poor judgment, loss of contact with reality, slurred speech, unsteady gait and, with a sufficient dose and duration, loss of consciousness. There are some reports that heavy doses of inhalants will also produce hallucinations, both visual and auditory. Several hours after use, lethargy and headache are common.

Neuropsychological problems. From the perceived and observed effects noted above it is clear that there is some level of impairment due to inhalants in the short term. Additional evidence for this comes from studies of neuropsychological studies of inhalant users. (Neuropsychological functioning refers to such things as intelligence, memory, problem solving, and visual, auditory and tactile perception). For instance, Korman et al. (1981) found that inhalant users performed more poorly on a number of neuropsychological tests including IQ measures and various measures of perception. It should be noted that these studies did not control for length of abstinence from inhalants, nor for problems that may have existed before inhalants were used. In a general review of this issue, Chadwick and Anderson (1989) concluded that, while most studies do show neuropsychological deficits in inhalant users, it is difficult to tell how extensive these are, or how long-lasting they are due to the many methodological problems already discussed.

Neurological problems. For a number of reasons, there is a modest degree of uncertainty as to the nature of the physical effects of inhalants. First, the high degree of variability and the combinations of chemicals in commercial and industrial compounds makes it very difficult to determine a direct effect from any particular chemical. Second, the degree of physical impairment is related to the dose and duration of use, factors which are difficult to ascertain from users. Third, there is the important question of the degree to which physical damage will be reversed upon cessation of use. Fourth, it is difficult to sort out problems that may have been in existence prior to the onset of inhalant use. Finally, many studies do not make a distinction between acute and chronic effects. For example, many neurological studies take place while inhalers are intoxicated and draw the conclusion that the effects found will be permanent. It should be recognized that inhalants are lipophilic which means they are deposited in fat tissues in the body and leach out into the bloodstream over an extended period of time. Tests for chronic effects should take place after an extended period of abstinence. Despite these problems, there are some commonly agreed upon physiological effects from the use of inhalants.

Tests for brain damage suffer from many of the same methodological problems listed above. Rosenberg and Sharp (1990), Ron (1986) and Dinwiddie (1994) reviewed the existing studies and came to essentially these conclusions: While a number of studies have revealed brain abnormalities (e.g. through CAT and MRI imaging), it is not clear whether these were preexisting conditions, they existed in all inhalant users and whether these problems will reverse over time. A very recent and comprehensive review of all of the evidence, including that from animal studies, leads one to the conclusion that some lasting damage does accrue but it is difficult to detect except in chronic, high dose users. (Sharp & Rosenberg, in press).

These conclusions raise a major question -- does the use of volatile solvents result in the level of brain damage that is commonly held among research and treatment professionals? What we know so far would indicate that the level of injury is not as severe as some think.

For a number of reasons, inhalant use does constitute a dangerous behavior and this danger should not be minimized:

1. **Current methods of assessment may not be sensitive enough to detect injury that may persist over time. Some studies have shown that among chronic, heavy users there is an actual loss of neural tissue (e.g. Fornazzari, 1983) so there is some reason to suspect that some neural loss is occurring among most heavy users.**

2. **Death can and does occur among inhalant users, (Garriot 1990; Cunningham et al. 1987; Bass, 1970; Maxwell 1994; Tenenbein 1990), some from first time use. The causes of death have already been discussed but bear repeating; asphyxia (commonly from plastic bags over the head), cardiac arrhythmias and failure, violence (both homicide and suicide), and accidents such as explosions, fires and head injury from passing out.**

3. **There are some inhalants that are known to cause permanent damage (e.g. compounds containing hexanes produce irreversible peripheral nervous system damage and other compounds cause hearing loss). It is difficult for the user to know whether the compound they are using contains the chemicals leading to these problems.**

Non-neurologic effects. In addition to the dangers already discussed, there are other medical problems that have been detected among solvent abusers; some of these involve acute crises that require immediate medical attention. Linden (1990) has reviewed the medical literature which indicated that there are heart, liver, kidney, blood and lung complications that accompany moderate to heavy use of inhalants (not all inhalants cause all of these problems). For the most part, once the immediate medical crisis had been managed, these problems tended to resolve with time.

PSYCHOLOGICAL AND SOCIAL EFFECTS

As with the use of any other drug, the use of inhalants is not without its effects on an individual's psychological and social functioning. It has been shown that inhalant users often have a number of other psychological problems (Dinwiddie et al. 1987 Oetting et al. 1988; Swadi 1996) and the continued use of inhalants will only exacerbate those conditions. In particular, the cognitive confusion caused by inhalants will only interfere with any therapeutic interventions or attempts to maintain a competent lifestyle.

Problems in family, work and school adjustment are also hallmarks of inhalant users.

Once again, amelioration of these problems is extremely difficult for an individual whose intellectual capacity is compromised by the use of inhalants. Furthermore, existing problems are only extended by inhalant use. Families will be more rejecting of youth who are using inhalants, and schools will be reluctant to provide educational and supportive services. Continued inhalant use into later adolescence is seen as an aberration even among peers leading to rejection in this important developmental arena. Inhalant using youth are marginal in many ways and the time used in obtaining, using and experiencing the effects of inhalants only serve to move them further away from normal socializing influences. Inhalants have not been shown to be addicting in the sense of exhibiting tolerance and withdrawal, yet the powerful psychological dependence that users report make it extremely difficult to stop use and engage in normal developmental tasks.

SIGNS AND SYMPTOMS

Signs and Symptoms Most Frequently Reported in Long-term, Heavy Users of Toluene-Containing Solvents

Short-term memory loss
Emotional instability
Cognitive impairment
Slurred and "scanning" speech
Wide-based ataxic gait
Staggering or stumbling
Nystagmus
Ocular flutter
Tremor
Optic neuropathy
Unilateral or bilateral hearing loss
Loss of sense of smell
Diffuse slowing of the EEG
Abnormal or absent brainstem auditory-evoked response
Diffuse cerebral, cerebellar, and brainstem atrophy
Enlarged ventricles and widening of cortical sulci, especially in the frontal or temporal cortex

-- *Gordon T. Pryor, Ph.D.*

RESEARCH NEEDS IN STUDYING INHALANT EFFECTS

Given the complexity of inhalant abuse, interdisciplinary research is necessary to effectively study the observed toxic effects of inhalants on humans. Contributing disciplines could include chemistry, pharmacology, medicine, psychology, psychiatry, sociology, child development, social psychology and group influence, and quantitative test and measurement specialties. Listed below are some of the desirable data elements for comprehensive studies.

Type of Substance Used. Relevant chemical and pharmacological data on inhalants might include the

type of substance used; the specific formulation; the nature and degree of its impurities; the volatility, potency, and resultant metabolites; the dose response curve; and the effects when used alone as compared to when used in combination with other chemicals.

Mode of Administration. Helpful sociological data would include the mode of administration (cloth, aerosol, bagging or huffing, heated volatile) and whether it was by mouth, nose, gastrointestinal routes, or skin absorption.

Drug Interactions. It is essential to know if other drugs are used consecutively or at the same time with the solvent; what interaction effects may have occurred such as adaptivity, synergism, antagonism, or independence; and whether observed effects were complicated by withdrawal or tolerance. Data on the user's drug history are also essential.

Developmental Issues. It is important to know the user's position in the drug dependence cycle (for example, whether (s)he is a novice or chronic user). Information on adolescent rebellion could help explain the user's

systematic or unpredictable use of solvents as well as the types of negative effects (social-behavioral and/or toxicological).

Dose. The amount of inhalant used may relate to mode of administration, potency of the solvent or its volatility, developmental factors, and social psychological factors such as duration of individual exposures and shared use among peers.

Reversibility of Damage. There is a common perception that inhalant users incur immediate and substantial brain damage. This perception leaves many practitioners, particularly in the treatment area, with the sense that there is little that can be done for these people. Accurate measurement of the extent and type functioning that can be recovered would be of great benefit to both those treating inhalant users and the users themselves.

Style of Use. Social psychological data could distinguish between episodic or continuous use, ascertain the dose and duration of exposure per drug-taking occasion, pinpoint the time lapsed between exposures, and determine whether the solvent is used alone, shared with peers, or combined with other substances.

Health Status. Medical data about the user's general health could help distinguish the observed effects of inhalants from the user's other medical conditions such as nutritional status, cognitive impairments, extant neurological damage, hepatitis, and other organ dysfunction.

Mental Health. A variety of psychological and psychiatric conditions can cloud relevant psychological test performance measurements, and distort the user's self-reported accounts of perceived inhalant effects.

Measurement Errors. Many measurement errors disrupt research of inhalant users, particularly those involving the source of subjects and the truthfulness of self-reports. Because inhalant use is a relatively rare phenomenon, locating appropriate test subjects is difficult. The setting from which subjects are taken can influence study results. For example, treatment clients are likely to be the most severe cases with multiple complications. The general inhalant user typically does not seek treatment, and those that do may not be typical of the user population. Subjects that are involved in the criminal justice system may be less likely to fully report their drug use or its effects for fear of further legal penalties. While subjects from school-based settings are useful, many inhalant users are often not in school. Similarly, data from household settings exclude the large number of homeless inhalant users.

Another concern is the truthfulness of the inhalant user's self-reports on use, as well as responses to a variety of interview questions. Self-reported data can be influenced by whether or not the subject is involved with the criminal justice system; by self-perceived stigma in reporting solvent use, and related deviant behavior; by cultural or peer-group taboos; or by the subject's accuracy in remembering his/her behaviors (due to inattention, memory loss, withdrawal effects, or other cognitive or neurological impairments).

Causes and Consequences of Inhalant Use Table of Contents Treatment of Inhalant Users

TREATMENT OF INHALANT USERS

Treatment of inhalant abusers must incorporate effective outreach, screening and diagnosis; involvement of the family in the therapy; consideration of environmental and behavioral influence; and appropriate selection of the treatment regimen (client/treatment matching)

PROBLEMS IN OUTREACH

The four basic problems in conducting outreach are as follows: (1) inhalant users do not typically seek treatment, thus only the most severe cases are observed in clinical settings; (2) inhalant users are often not in school, so school-based treatment and prevention/education may not reach many of the users; (3) home-based case-finding is ineffective for the homeless; and (4) involvement of the family in the treatment process is necessary. When treatment is focused solely on the youthful client, without family involvement, relapse is likely (WHO 1986).

The families of many inhalant users have been described as extremely chaotic and early assessment of family functioning is essential. It may well be determined that the family is not at a point where they are capable of making the needed therapeutic changes and alternative short or long-term foster placement of an adolescent should be considered (Jumper-Thurman & Beauvais 1992). It has also been observed that, once identified, inhalant users are reluctant to enter treatment and will often leave treatment in the early stages. Careful work must be done at this stage to insure continued compliance with treatment. Most clinicians who work with inhalant users recognize that users are very wary of professionals and physiologically are very sensitive to strong stimuli; thus strong, confrontive interactions should be avoided as users are brought into the early stages of treatment.

SCREENING AND DIAGNOSIS

Due to the wide range of problems encountered by inhalant use, a thorough assessment of all areas of physical, psychological and social functioning is necessary. While this is standard practice in most drug abuse treatment, it takes on added importance with inhalant users since the level of dysfunction in any one area may seriously impact another. A thorough physical exam should be performed to rule out acute system problems that may need attention before treatment for inhalant abuse can begin (Linden 1990). A careful history of length and intensity of inhalant use is useful in determining when and at what level treatment can begin (See "Detox" below). An inventory of family, peer, educational and occupational resources (or deficits) should be conducted early on since restructuring in all of these areas may constitute a major part of treatment (Jumper-Thurman & Beauvais 1992). Discharge and aftercare plans should begin with the assessment process and continue throughout the course of treatment. Where resources are available, a neurological examination at intake can be helpful in assessing level of neurologic injury and functioning.

Neurotoxic disorders due to inhalant use can be confused with other conditions, and mild cases of neurotoxic injury are very difficult to diagnose (Rosenberg 1990). Although diagnoses are difficult to make, individuals do develop a similar clinical picture when exposed to solvents at equivalent doses for equivalent durations of time (Rosenberg 1990). The use of MRI (magnetic resonance imaging) is a potent procedure to detect abnormalities in users (Rosenberg 1990). Current technology can detect abnormalities in brain structures, and continuing advances offer great promise for enhanced screening and diagnosis in the future.

DETOXIFICATION

Detoxification is typically seen as the time during which a drug or alcohol user is recovering from the acute effects of the substance they have been using. For most drugs this is usually less than a week. After

that time, most of the chemical is out of the individual's body and they are then ready to engage in the therapeutic process. Detox time for inhalant users differs from this schedule in a number of ways. First, given that inhalants are stored in fatty tissue in the body and are slowly leached back into the blood stream, it may be several weeks before the direct action of the chemicals is no longer present. Second, although much of the neurological damage from inhalant use is reversible, this healing process takes considerable time. Finally, at the point that many inhalant users enter treatment, their nutritional and general health status is seriously compromised. As a result of these conditions, the detox period for many inhalant users is more extensive than for other drug users (Jumper-Thurman & Beauvais 1992; Fredlund 1994; Sharp & Rosenberg, in press). At the initiation of treatment, many users are lethargic, physically weakened and cognitively confused. Premature attempts to implement therapies that require energy and clarity of thought will only lead to failure and frustration, both on the part of the patient and the treatment staff.

There is no agreed upon standard period of detoxification for inhalant users although it is clear that the usual 30-45 day treatment regimen typically employed with substance abusers is inadequate. It may take this amount of time simply to get the user to the point where therapeutic gains can be made. The above, of course, is a generality and each patient must be assessed individually. Detox and total treatment time will vary according to the level and duration of solvent use, the basic health of the individual and the repertoire of other social resources that can be brought to bear on the process of recovery, and periodic assessment of cognitive function is required to monitor changes and determine readiness for more therapeutic interventions (Fredlund 1994).

LIFE SKILLS

Many solvent users have become socially marginalized throughout the time they have been involved with inhalants. Many lack basic social and health care skills; they may have experienced academic failure and have not developed the minimal competencies for holding a job. Further, they may be socially inept and have learned to interact with others only through aggressive (or even passive) means. All of these elementary issues are of importance in the early stages and throughout the course of recovery. Clearly, treatment must involve collaboration with a wide range of community resources. Given the initial level of deficits, aftercare and follow-up are of extreme importance when working with inhalant using patients. In addition, due to cognitive problems, organized activities should be brief (20 minutes) and varied and deal with concrete subject matter consistent with the limited attention span and capacity for abstract thought of clients experiencing acute effects of neurotoxicity.

PEERS

The social world of many inhalant users has become very constricted and they tend to associate only with a small group of individuals who are also heavily inhalant involved (Oetting & Webb 1992). This patternis somewhat characteristic of all drug users but seems to occur more commonly among inhalant users. A major task of therapy, then, is to both break these peer bonds and to resocialize the users into a new peer environment. Lack of contact with the previous peerstructure is essential throughout the course of treatment.

FAMILY TREATMENT

Treatment of young drug users is significantly enhanced by the involvement of the family in the treatment regimen, and is best when individually tailored to client needs (Szapocznik & Kurtines 1989; Stanton & Todd 1982; Rubin & Babbs 1970). Children have many needs which, if unmet in the family, may foster drug use: "Any reliable prevention or treatment program must provide the means to substitute non-harmful activities that satisfy these users' needs for gratifications sought previously in solvent Sniffing" (Kerner 1988, 9). When designing treatment, it is essential to analyze the children's needs and

the role the family plays in satisfying those needs in order to teach drug abuse resiliency factors.

TREATMENT MATCHING

Matching clients with specific, individualized treatments is a relatively new focus in treatment of alcohol and drug addictions (Hester & Miller 1989; Gottheil et al. 1981). Because inhalant users are different from the general drug users, different treatment and prevention strategies must be applied (Giovacchini 1990), because "it is not clear if approaches to working with alcoholand marijuana-using youth are effective with inhalant-using youth" (Mata & Andrew 1988, 71). The challenge for inhalant treatment approaches is to tailor the regimens to the differing target populations. Some have even questioned whether inhalant abusers can be treated in a general drug abuse treatment program or whether dedicated programs are needed (Jumper-Thurman & Beauvais 1992).

There are three major considerations in client-treatment matching: (1) matching specific treatment to the specific needs of the youthful inhalant user and the user's family, (2) matching both the client's and the therapist's cultural status and cultural sensitivity, as well as the cultural relevance of the proposed interventions, and (3) matching the global therapeutic approach to the client's mental abilities and emotional development. From a global perspective there are at least seven therapeutic approaches: (1) *Behavioral,* which aims to control and/or change maladaptive behaviors and increase or teach adaptive behaviors; (2) *Cognitive,* which seeks to correct maladaptive cognition; (3) *Developmental,* which seeks to remedy structural deficits in ego development; (4) *Exploratory,* which seeks to increase understanding and resolution of intrapsychic problems and conflicts; (5)*Psychopharmacological,* which considers medications to be the prime treatment, or as treatment adjuncts; (6) *Supportive,* which offers help to manage problems in daily life by strengthening available coping skills; and (7) *Systemic,* which focuses on restructuring patterns of interactions and communications as well as roles in family or social systems. Given the complexity of inhalant abuse, most of these approaches may be appropriate and necessary.

There are at least ten needs that should be attended to in treatment, and which should be understood by the parents (Glenn 1981):

1. Children need to be able to exercise self-discipline, self-assessment, and self-control.
2. Children need to develop self-esteem.
3. Children need clearly defined limits.
4. Children need the ability to operate successfully within a system (for example, if they skip homework one night, then they must do it in the morning; if they skip doing homework too often, then they loose the privilege of playing school sports).
5. Children need confidence that they can affect what happens to them. If they see themselves as victims, they will turn to drugs; if they do not learn to operate within limits, then they will not learn how their own acts affect them.
6. Children need the ability to make judgments, which they learn by being with mature adults (example combined with dialogue).
7. Children need positive role models.
8. Children need skills for working effectively with others.
9. Children need to feel they are loved and valued.
10. Children need open, honest communication with their parents.

YOUTH ADVOCACY PROGRAM STUDY: METHOD

A Total of 175 Mexican-American youth (aged 13 to 17 when they entered the Youth Advocacy Program (YAP) between March 1981 and December 1985) were targeted for followup. An examination of inhalant use reported by these 175 clients at admission to the YAP showed that 35 (20 percent) used at least weekly in the 2 months prior to YAP (Weekly--Group 1), another 42 (24 percent) used at least once a month (Monthly--Group 2), 34 (19 percent) had used previously but not in the prior 2 months immediately before admission to the YAP (Experimental--Group 3), and 64 (37 percent) had never used inhalants (Never Used--Group 4). These clients stayed in the program an average of approximately 13 months, during which time they received individual counseling and participated in a variety of recreational activities, cultural enrichment, academic tutoring, and related life-skills training. Unfortunately, detailed client participation records were not available in this study for specifically evaluating these services.

Private face-to-face follow-up interviews provided information about drug use patterns and related problems over time. Behavioral outcome measures were examined in regard to acculturation and background factors, psychosocial adjustment indicators, and parental and peer relations. Clients were not assigned to be interviewed as part of the follow-up study until at least two years after entering YAP. The interview period began October 1987 and was completed in April 1988, an average of over four years after admission to the YAP.

Of the 175 cases in the target sample, 150 (86 percent) were successfully traced; 110 (63 percent) gave informed consent and were interviewed. Of the 110 completed cases, 79 percent of the mothers were also interviewed. Incentives of $10 were paid for each completed interview. In order to conduct several basic toxicological evaluations of recent drug use and organ system functions, a subsample of the interviewed youth were asked to provide blood and urine specimens. For another $10 incentive fee, 44 out of 59 youth who were asked agreed to participate (75 percent) and were taken to a medical laboratory where body fluids were obtained for analysis.

-- Dwayne Simpson, Ph.D.

Treatment of the inhalant abuser is often complicated by the presence of multidrug and polydrug use. During the early stages of treatment, questions about why the user takes drugs and the user's perceived needs assures the youth's active participation in the treatment process. During later stages of treatment focus can shift to more psychodynamic considerations. Finally, because quick action of the drug appeals to people who want instant gratification, aspects of treatment can focus on teaching the user how to delay gratification. The need for immediate gratification often affects all aspects of the user's life, and is an important topic for treatment.

A PERSPECTIVE FOR COUNSELORS

An understanding of the origins of inhalant abuse is necessary for effective treatment and prevention. Treatment regimens can be structured around what youth want but feel they do not have. Youth look for guides and teachers, and finding few or none, experience alienation. Youth also crave relation, security, affection and acceptance; gangs and peer groups often offer these. In fact, the ceremony of sharing drugs draws youth together and at the same time sets them apart. As families unravel, youth turn to one another for sustenance. Perhaps the family's most important legacy to the young is a sense of self, developed

through rich familial communications, rather than merely discipline or morality. What parents see as adolescent rebellion may be no more than the youths' imitation of their parent's patterns of escape (e.g., alcohol, coffee, tobacco, and pills). In this sense one does what one sees, namely to use drugs to change things or evade them.

It has been said that culture and class conditions can imprison youth, teaching them what to feel and avoid, what is allowed, and what is taboo. Drugs may offer a release from these pressures. On the other hand, some cultures sanction ceremonial drug use to achieve transcendence, and these rituals and ceremonies serve significant communal needs.

Given the indications that neither traditional psychotherapeutic approaches (Comstock 1978; Guyer-Christie 1978) nor standard drug rehabilitation (Dinwiddie et al. 1987) have been wholly successful with inhalant users, there is a need to explore alternative treatments, particularly with young adult users, such as vocational counseling and testing, job-training and placement, training in employment interviewing skills, methods to develop good work adjustment habits, and learning to conform to the work environment (Oetting 1990). The most formidable problem confronting treatment may be the specter of relapse: "The patient who is completely drug free, imbued with all types of motivation to remain drug free, but with no job, no insight into how to sustain a relationship, often [struggling with] major psychiatric problems--that is the person who is a big candidate for relapse" (McLellan 1990, 6).

YOUTH ADVOCACY PROGRAM STUDY: SUMMARY OF RESULTS

The study focused on "high-risk" youth whose average age at intake was just under 15, and average age at follow-up was 19. Analysis at intake indicated that the four groups of inhalant users -Weekly, Monthly, Experimental, and Never Used -were generally comparable in terms of sociodemographic characteristics, but use of alcohol and other drugs, as well as legal involvement measures, were directly associated with level of inhalant use. Followup analysis indicates that these trends remained intact: youth who were heavier inhalant users at intake continued to have more negative outcomes four years later.

The group of weekly inhalant users had lower employment rates, higher prevalence of arrests and illegal activity, and more drug use than the other groups. At least two-thirds of each group used illegal drugs in Year 4 of the follow-up, but this was true of 95 percent of the weekly users. About 45 percent of the weekly users consumed on average more than four ounces of 80-proof liquor equivalent per day. The only exception to the continued tendency to use more kinds of drugs by the weekly inhalant user group involved cocaine. Preadmission cocaine usage was 10 percent for the total sample, but it escalated to 31 percent at follow-up; in contrast to all other drug categories, the preadmission group of weekly inhalant users had the lowest level of cocaine prevalence in Year 4.

Based on the subsample of 44 individuals for whom blood specimens were collected and analyzed, laboratory results for one out of three youth showed evidence of liver problems, and were more pronounced among those with the most extensive histories of inhalant use. The use of other drugs was related to other blood test abnormalities, but not to liver problem indicators. Youth with more extensive inhalant use histories reported more cognitive problems involving clarity of thinking, decision making, concentration, and remembering details. Over one-fourth of these youth had experienced suicidal

and remembering details. Over one-fourth of these youth had experienced suicidal thoughts, and one-fifth had made at least one suicide attempt.

-- Dwayne Simpson, Ph.D.

Effects of Inhalant Use Table of Contents Prevention of Ihalant Use

PREVENTION OF INHALANT USE

Selecting appropriate, effective, and viable prevention efforts is one of the most difficult problems in the inhalant abuse field. Prevention efforts must be timely, especially in inhalant work, because of the everchanging nature of use patterns, as well as the substances abused. Many drug findings are time-bound, thus results from two decades ago are no longer relevant to today's prevention efforts (Trimble 1990). Prevention approaches can be thwarted in often unanticipated ways; the following problems are the foremost among the many confronting prevention efforts.

A Relatively Infrequent Event. Because inhalant use is infrequent among adults, prevention efforts typically focus on drugs more commonly abused by adults; however, inhalant prevalence is relatively high among youth, and should be a priority focus of prevention efforts targeted at youth.

Limited Fiscal Resources. Because fiscal and personnel resources in many health care systems are limited, attention is directed to the drugs commonly abused by adults. Resources for inhalant research are limited in general, making it even more difficult to fund much-needed (but very expensive and methodologically complex) longitudinal studies (Cresson 1990).

Limiting Availability. In practice it has been impossible to limit availability of volatile, inhalable substances (WHO 1986). If legal sanctions are applied to limit the availability of the volatile substance, then users will shift to other easily available solvents with potentially more toxic effects. Limiting only the most detrimental solvents might be insufficient; it may be necessary to ban even mild or relatively harmless drugs if toxic interaction effects occur when these mild substances are mixed together. Because volatile solvents are licit rather than illicit drugs, they pose special problems in prevention because total prohibition is unlikely, and criminal sanctions are not a viable deterrent to their use.

Criminalization of the User. In some places it is illegal to sell inhalants to minors, or for minors to use inhalants for sniffing purposes; some inhalant abusers are mandated to treatment. Careful evaluations of such approaches have yet to be made. One report concluded, "In general, legal sanctions against inhalant abusers is not a preferred method of prevention. Such sanctions do not appear to reduce abuse and they create additional problems for users." (WHO 1986, 28)

Chemical Deterrents. Adding deterrents (foul-smelling or irritating substances) to solvents to discourage use is no longer a prime avenue of prevention for at least four reasons: (1) users would likely switch to other, potentially more toxic solvents if the deterrent were too noxious; (2) the user may not interpret their effects as noxious, or might even like the dare-devil aspects of use; (3) the legitimate uses and users of the substance might be adversely affected; and (4) commercial manufacturers would fear a reduction in product sales. Many of the deterrents that have been explored were deemed too noxious, too toxic, or unstable (Giovacchini 1990).

Chemical Reformulations. In developing prevention approaches, one must consider if the cure is an effective preventive procedure. In Canada, polish removers have been made "oily," which makes them less volatile and does not release fumes as rapidly. Although intoxication can occur, it takes longer for users to experience the effect. In another example, the solvent component of liquid correction fluids was replaced by a water-based component which was clearly safer, but took much longer to dry. Neither the legitimate consumers nor the illicit inhalers found the product satisfactory, and thus its use and sales diminished significantly.

Chemical Packaging. While some argue that labeling a product's side effects would deter use and alert parents, others note that product-labeling would also pinpoint products that give a high (Giovacchini

1990).

Information Dissemination vs. Media Contagion. Although it has been suggested that mass media reports should not contain detailed information on what products are being sniffed or just how it is being done (WHO 1986, 32), it is difficult to ride the line between information dissemination and censorship, and to prevent the exchange of information on drug practices between youth and their peers. For example, several companies produced an educational film on the detrimental effects of sniffing, but the films were never released because people argued as to whether the films would deter inhalant use, or introduce youngsters to a new mode of administration or new products and inadvertently increase use (Giovacchini 1990). The following issues must be considered carefully before disseminating information.

Target Groups. One must distinguish carefully the target groups of prevention messages. Prevention messages aimed at non-users will, by necessity, be unlike those aimed at the inhalant user (Ives 1986). In general, the non-user has different attitudes, often negative, toward inhalants than the user. At issue is whether the message should be abstinence (a potentially appropriate message for non-users) or harm reduction (a potentially more useful strategy for chronic inhalant abusers). A related issue is the role inhalants play in initiating subsequent drug use: if inhalants are effective gateway drugs to other use, then prevention efforts are best focused on those who have not yet begun any drug experimentation.

Stigma is a subtle but insidious problem that arises when media (as well as research) coverage identifies and links certain groups with inhalant abuse. For example, by the time Native American youth reach their senior year, only 4 percent are using inhalants seriously enough to warrant concern (Oetting et al. 1988). Therefore, to label all these youth as inhalant users is stigmatizing.

Since prevalence of inhalant abuse is not uniform across locales (Smart 1988), effective prevention efforts should target not only specific users, but also specific regions. Target areas could be populations with high prevalence rates, or communities with few social assets and undergoing rapid acculturation changes.

Abstinence vs. Harm Reduction. Prevention messages in the addictions can range from total abstinence to harm reduction. For example, in the alcohol field abstinence is a common message aimed at young people, while moderate, responsible drinking is a prevalent message with college students. Whether clean needles should be freely dispensed to intravenous drug users (a harm reduction approach), or whether they should not (an abstinence approach) is another case in point. The former approach is based on the notion that current treatments and prevention have not been successful; consequently, partial prevention successes (harm reduction) are worthwhile, albeit as a first step.

However, applying the harm reduction model to the use of inhalants should be seriously questioned. Unlike most other drugs, inhalants have the potential to kill, even for first time, naive users. Second, most inhalant use takes place at a very young age compared to other drugs and a message that says "Use it, but be careful" is inappropriate for this age group. It is one thing to counsel a college student about prudent use of marijuana, but quite another to give the same message to a 13 year old who is already experiencing psychological and social problems (Beauvais 1996).

Scare Tactics. Scare tactics have never been shown to be an effective deterrant to drug use. Children may not believe exaggerated negative messages since these conflict with their own observations of effects. As a result, children may disbelieve other prevention messages, since the source seems unreliable. Over-reliance on scare tactics (such as legal ramifications) may further remove youth from the social fabric and engender disrespect for the law, authority figures and social structures. In addition, programs emphasizing the negative social consequences of drug use may cause increased use, since inhalant users may regard rejection by "good kids" as an asset, not a liability, and only push inhalant

users to affirm their deviant peer culture groups (Oetting 1990).

Legislative Efforts. Legislative efforts against inhalant abuse are best categorized as semi-interdiction approaches with the aim of keeping the drugs out of the hands of youngsters. Because of commercial considerations, full interdiction is not feasible. Legislation has been product-based, abuser-based, and supply-based. Product-based legislation has included warning labels, use of deterrents, repackaging, and reformulation. Abuser-based legislation has made it illegal to sniff or to be high from sniffing (thus labeling the user as a criminal), and has sniffing. Supply-based legislation has placed age restrictions on purchasing, made it an offense to sell products to a minor for sniffing purposes, and placed a total prohibition on availability of some products.

Many of these efforts have been thwarted because of the following: (a) fear of drug substitution (users would switch to other drugs not legislatively controlled); (b) fear of media contagion (the problem of sniffing, if publicized, could cause the problem to escalate); (c) impracticability of adequately monitoring sales to youth; and (d) concern that if availability was limited, shoplifting would increase or black markets would be formed.

Treatment of Inhalant Users Table of Contents Research Issues in Inhalant Use

COMMITTEE:HOUSE HEALTH, EDUCATION & SOCIAL SERVICES	SUBJECT: HB 91-ADD PHYSICIAN ASST TO STATE MEDICAL BOARD

DATE: March 1, 2001

PLEASE SIGN IN

PLEASE PRINT: NAME & TITLE	ADDRESS (MAILING & ZIP)	PHONE	REPRESENTING (No Acronyms, Please)	DO YOU WANT TO TESTIFY ?
Orie Williams	PO Box 688 Bethel	543-6012	~~AFN~~ Self	No
Erin Garlinghouse	PO 256 Kotz	442-7871	Manilaq	"

SITE: ~~JUNEAU~~ **LIO**	**SUBJECT OF MEETING:**
COMMITTEE: ~~none~~ HHES	~~Lio training~~ HB 114
DATE: ~~01/02/01~~ 3/1/01	**UPDATE #: 1**

PLEASE SIGN IN

PLEASE PRINT: NAME	ADDRESS (MAILING & ZIP)	REPRESENTING	DO YOU WANT TO TESTIFY? Y or N
Barb Brink	Anchorage	Public Defenders office	
Steve Dunnagen	Anchorage	AK State troopers	

COMMITTEE:HOUSE HEALTH, EDUCATION & SOCIAL SERVICES	SUBJECT: HB 114 Inhalant Abuse

DATE:

PLEASE SIGN IN

PLEASE PRINT: NAME & TITLE	ADDRESS (MAILING & ZIP)	PHONE	REPRESENTING (No Acronyms, Please)	DO YOU WANT TO TESTIFY ?
Eric Tomasino	PO Box 4281 Palmer, AK 99645 ~~Area / Teen Challenge~~	745-4303	Governors Board Alcoholism	yes

COMMITTEE:HOUSE HEALTH EDUCATION & SOCIAL SERVICES	SUBJECT: HB 114-INHALANT ABUSE

DATE: March 1, 2001

PLEASE SIGN IN

PLEASE PRINT: NAME & TITLE	ADDRESS (MAILING & ZIP)	PHONE	REPRESENTING (No Acronyms, Please)	DO YOU WANT TO TESTIFY ?
Randy Lorenz	326 N. Bailey ST Palmer AK 99645	465-3759 745-4772	Self	Yes
RAJ MASKAY	CHEMS	465 5319		NO
Robert Buttcane	HSS DJJ- BOX 110635, JUN 99811	465-3228	HSS - DJJ	YES
~~Jim Henkelman~~	YKHC - 2957 Yukon Dr. Anchorage AK 99508	~~230-5693~~	~~YKHC - Inhalant Project~~	~~yes~~

COMMITTEE:HOUSE HEALTH, EDUCATION & SOCIAL SERVICES	SUBJECT: HB 114-INHALANT ABUSE

DATE: March 1, 2001

PLEASE SIGN IN

PLEASE PRINT: NAME & TITLE	ADDRESS (MAILING & ZIP)	PHONE	REPRESENTING (No Acronyms, Please)	DO YOU WANT TO TESTIFY ?
Donna Galbreath	1958 Kathrine Fbks AK	457-4523	Gov's Youth Guard	No
Alice Johnstone	213 Shotgun Alley Sitka AK	747-3931	AB ADA	NO
Agnes Sweetsir	Box 8 Galena 99741	656-1245	AB ADA	NO
Cristy Miller Tilden	PO Box 786 Dillingham 99576	842 2258	BBAHC	No
Valerie Therrien	779 8th Ave Fbx	456 8113	ABADA	Yes

Sections 1 and 2 of the bill create a new crime of misdemeanor abuse of inhalants to criminalize the inhaling of petroleum products and other household products or drugs. Section 2 further provides that any juveniles charged with this behavior will be processed through the district court as adults.

The creation of a new crime, as always, will increase the caseload and workload responsibilities of the Public Defender Agency. However, without hard data regarding the numbers of people engaging in this behavior and the ease of their detection, it is impossible to quantify how many people will be arrested, prosecuted and appointed to the Agency. Therefore, while the impact is certain, the actual numbers of cases and increased resources needed are not possible to quantify at this time.

Sections 3 through 15 add the use of inhalants to the protective custody process, which previously existed for persons, incapacitated by alcohol or drugs. As the Public Defender Agency is not appointed to represent people in this process, but rather the Office of Public Advocacy is, there will be no impact to the Agency although certain impact, but unquantifiable, to the Office of Public Advocacy.

FISCAL NOTE

STATE OF ALASKA
2001 LEGISLATIVE SESSION

Fiscal Note Number:
Bill Version: HB 114
() Publish Date:

Revision Date/Time (Note if correction):
Title "An Act relating to abuse of inhalants."
Sponsor Representative Kapsner
Requester House HESS Committee

Dept. Affected: Law
BRU Criminal Division; Civil Division
Component 1st-4th Judicial Districts; Criminal Appeals/Special Lit; Human Services
Component No. 2198-99;2201/03/08/61/79

Expenditures/Revenues (Thousands of Dollars)

Note: Amounts do not include inflation unless otherwise noted below.

OPERATING EXPENDITURES	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007
Personal Services						
Travel						
Contractual						
Supplies						
Equipment						
Land & Structures						
Grants & Claims						
Miscellaneous						
TOTAL OPERATING	0.0	0.0	0.0	0.0	0.0	0.0
CAPITAL EXPENDITURES						
CHANGE IN REVENUES ( )						

FUND SOURCE (Thousands of Dollars)

1002 Federal Receipts						
1003 GF Match						
1004 GF						
1005 GF/Program Receipts						
1037 GF/Mental Health						
Other (Specify Type)						
TOTAL	0.0	0.0	0.0	0.0	0.0	0.0

Estimate of any current year (FY2001) cost: 0.0

Check this box (X) if funding for this bill is included in the Governor's FY 2002 budget proposal:

POSITIONS

Full-time						
Part-time						
Temporary						

ANALYSIS: *(Attach a separate page if necessary)*

HB 114 creates a new class B misdemeanor crime for abuse of inhalants. Minors charged with this crime would be treated as adults, and the prosecution and sentencing would take place in District Court.

The Department of Law does not anticipate a significant fiscal impact from passage of this legislation. Expanding the civil commitment process to include inhalant abuse could potentially increase Civil Division costs. However, alcohol and drug civil commitments performed by assistant attorneys general are rare, and we expect the same to be the case with inhalants.

Prepared by: Joan M. Kasson Phone 465-5370
Division Attorney General's Office Date/Time 2/26/01 4:55 PM
Approved by: Kathryn Daughhetee for Bruce M. Botelho, Attorney General Date 2/26/01
Agency Department of Law

For distribution information, call the Governor's Legislative Office

(Rev 11/2000 OMB)

FISCAL NOTE

STATE OF ALASKA
2001 LEGISLATIVE SESSION

Fiscal Note Number:
Bill Version: HB 114
() Publish Date:

Revision Date/Time (Note if correction):
Title: "An Act relating to abuse of inhalants."
Sponsor: Representative Kapsner
Requester: (H) HESS

Dept. Affected: Administration
BRU: Legal and Advocacy
Component: Public Defender
Public Advocate
Component Number: 1631 & 43

Expenditures/Revenues (Thousands of Dollars)

Note: Amounts do not include inflation unless otherwise noted below.

OPERATING EXPENDITURES	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007
Personal Services	**	**	**	**	**	**
Travel						
Contractual						
Supplies						
Equipment						
Land & Structures						
Grants & Claims						
Miscellaneous						
TOTAL OPERATING	**	**	**	**	**	**
CAPITAL EXPENDITURES	**	**	**	**	**	**
CHANGE IN REVENUES ( )	**	**	**	**	**	**

FUND SOURCE (Thousands of Dollars)

1002 Federal Receipts	**	**	**	**	**	**
1003 GF Match						
1004 GF						
1005 GF/Program Receipts						
1037 GF/Mental Health						
Other (Specify Type)						
TOTAL	**	**	**	**	**	**

Estimate of any current year (FY2001) cost: 0.0

POSITIONS

Full-time						
Part-time						
Temporary						

ANALYSIS: *(Attach a separate page if necessary)*

See attached sheet.

Prepared by: Barbara Brink, Director/Brant McGee,Director
Phone (907) 334-4414
Division Public Defender Agency/Office of Public Advocacy
Date/Time 02/27/01
Approved by: Jim Duncan, Commissioner
Date 2/27/01
Agency Department of Administration

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HOUSE COMMITTEE REPORT

(7)
Date Referred to Committee: February 7, 2001

FURTHER REFERRALS: Judiciary
Finance

Date of Committee Action: MARCH 15 2001

The HEALTH, EDUCATION AND SOCIAL SERVICES Committee considered: **HB 114**

HOUSE BILL NO. 114 **INHALANT ABUSE**

"An Act relating to abuse of inhalants."

Recommends it be replaced with ____CS HB 114 (HES) [ ] **Same Title** [✓] **New Title**
*For Senate Bills with new title: [ ] Technical Title [ ] New Title: HCR*____

[ ] attach amendments
[ ] add new referral to _____ Committee
[ ] Letter of Intent _____Co nmittee

List of Abbrev. For Depts.:
ADM
CED
COR
CRT
EED
DEC
DFG
GOV
HSS
LAA
LAW
LWF
MVA
DNR
DPS
REV
DOT
UA

NEW FISCAL NOTES *For Chief Clerk's Office Use Only				
FN# *	List by Dept(s):	Fiscal	Indet.	Zero

PREVIOUS FISCAL NOTES				
List by Dept(s):	FN #	Fiscal	Indet.	Zero

Signing with recommendations	Printed Last Name	DP	DNP	NR	AM
	Coghill	✓			
	Wilson	↘			
	CISSNA	✓			
	Foule	✓			
Chair:	Dyson	✓			
Chair:					

HOUSE COMMITTEE REPORT

(7)
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PREVIOUS FISCAL NOTES				
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Signing with recommendations	Printed Last Name	DP	DNP	NR	AM
	Coghill	✓			
	Wilson	✓			
	CISSNA	✓			
	Toule	✓			
Chair:	Dyson	✓			
Chair:					

HOUSE COMMITTEE REPORT

(7)

Date Referred to Committee: February 7, 2001 **FURTHER REFERRALS: Judiciary Finance**

Date of Committee Action: MARCH 15 2001

The HEALTH, EDUCATION AND SOCIAL SERVICES Committee considered: **HB 114**

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Chair:					