From: Blankenship, Johni
Sent: Wednesday, February 17, 2016 3:56 PM
To: Navarre, Mike; Ostrander, Paul; Gilman, Blaine; Bagley, Dale; Dunne, Willy; Holmdahl, Brandii; Johnson, Brent; Cooper, Kelly; Knopp, Gary; Welles, Stan; Ogle, Wayne
Cc: Turner, Michele
Subject: Robert Thraves
Attachments: Marijuana Info - Robert H. Thraves.pdf

Good afternoon, public member Robert Thraves asked that the attached documents be distributed to the Assembly, he will be at the Assembly meeting on February 23rd to address the issue of prohibiting marijuana establishments in the borough.

Thank you,

Johni Blankenship, MMC
Borough Clerk
Kenai Peninsula Borough

TO: MEMBERS OF THE BOROUGH ASSEMBLY
FROM: ROBERT H. THRAVES, P.O. BOX 941, SOLDOTNA, AK 99669

SUBJECT: SHOULD MARIJUANA BE SOLD IN STORES IN THE KENAI PENINSULA BOROUGH?

I am enclosing current research documents that connect marijuana use with death by heroin overdose, death by suicide, and serious criminal activity.

Please read these studies and realize that more research is needed before making a decision authorizing marijuana stores.

Alaska Scorecard

Key Issues Impacting
Alaska Mental Health Trust Beneficiaries

Trust
Alaska Mental Health Trust Authority

Click on the title of each indicator for a link to complete sources and information

Key to symbols:
✓ Satisfactory
⟺ Uncertain
✗ Needs Improvement

		Most Current U.S. Data	Previous Year's AK Data	Most Current AK Data	Status
Health					
Suicide					
1	Suicide (rate per 100,000)	12.6	23.6	24.2	✗
2	Percent of adults reporting serious thoughts of suicide	3.9%	4.4%	4.2%	⟺
Substance Abuse					
3	Alcohol-induced deaths (rate per 100,000)	8.8	33.0	29.4	✗
4	Percent of adults who engage in heavy drinking	6.2%	6.5%	7.7%	✗
5	Percent of adults who engage in binge drinking	16.8%	17.3%	18.5%	⟺
6	Percent of population (age 12 and older) who use illicit drugs	9.2%	14.0%	12.9%	✗
Mental Health					
7	Days of poor mental health in past month (adults)	3.7	3.3	3.1	✓
8	Percent of teens who experienced depression during past year	29.9	25.9%	27.2%	✗
Access					
9	Percent of population without health insurance	14.5%	19.0%	18.5%	✗
Safety					
Protection					
10	Children abused and neglected (rate per 1,000)	9.1	15.6	13.0	✗
11	Substantiated reports of harm to adults (rate per 1,000)	†	1.1	1.2	⟺
12	Injuries to elders due to falls, hospitalized (rate per 100,000)	1,472	1,166	1,061	✓
13	Traumatic brain injury, hospitalized non-fatal (rate per 100,000)	†	79.9	81.2	✓
Justice					
14	Percent of incarcerated adults with mental illness or mental disabilities	†	42.0%	65.0%	✗
15	Rate of criminal recidivism for incarcerated adults with mental illness or mental disabilities	†	39.2%	38.9%	⟺
16	Percent of arrests involving alcohol or drugs	†	42.9%	29.5%	⟺
Living With Dignity					
Accessible, Affordable Housing					
17	Chronic homelessness (rate per 100,000)	26.4	25.1	28.0	⟺
Educational Goals					
18	Difference between high school graduation rate for students with and without disabilities	†	32.7%	33.0%	⟺
19	Percent of youth who received special education who are employed or enrolled in post-secondary education one year after leaving school	†	58.0%	72.0%	⟺
Economic Security					
20	Percent of minimum wage income needed to afford average housing	†	89.6%	90.7%	✗
21	Average annual unemployment rate	7.4%	7.0%	6.5%	✓
22	Percent of SSI recipients who are blind or disabled and are working	4.3%	6.6%	6.8%	✓

Prevalence Estimates: Alaska Mental Health Trust Beneficiaries

Alaska Mental Health Trust Beneficiary Population	Number	Population Rate
Serious Mental Illness (ages 18+)	21,754	4.0%
Serious Emotional Disturbance (ages 0 to 17)	12,725	6.7%
Alzheimer's Disease (ages 60+)	6,100	9.0%
Traumatic brain injury (all ages)	11,900	1.6%
Developmental disabilities (all ages)	13,270	1.8%
Dependent on alcohol (ages 12 to 17)	1,000	1.6%
Dependent on alcohol (ages 18+)	20,000	3.7%

December 2014

† No comparable U.S. data available

http://dhss.alaska.gov/dph/HealthPlanning/Pages/scorecard

- The 2013 rate of depression was significantly higher among females (35.7%) than males (19.0%) in traditional high schools in Alaska.
- The 2011 rate was higher among students in alternative (39.8%) than traditional (27.2%) high schools in Alaska.
- Among students attending a traditional Alaska high school, the 2013 Youth Risk Behavior Survey reported that in the prior 12 months:
  - 13.9% had made a plan about how they would attempt suicide
  - 20.7% had been bullied on school property
  - 9.1% had been hit, slapped or physically hurt on purpose by their boyfriend or girlfriend.[33]

Statutory Information:

- Per Alaska Statute, the Department of Health and Social Services, the Alaska Mental Health Trust Authority and partner organizations work cooperatively to plan, budget and implement an integrated comprehensive mental health program for Alaska. AS 47.30.660(a); AS 47.30.011(b); AS 37.14.003(a); AS 47.30.046(a).
- The Statewide Suicide Prevention Council was established by the Alaska Legislature in 2001 and is responsible for advising legislators and the Governor on ways to improve Alaskans' health and wellness by reducing suicide, and improving public awareness of suicide and risk factors, enhancing suicide prevention. AS 44.29.350(a).
- The Alaska Mental Health Board and the Advisory Board on Alcoholism were established by the Alaska Legislature in 1995 and are jointly charged with planning and coordinating behavioral health services funded by the State of Alaska. The joint mission of AMHB and ABADA is to advocate for programs and services that promote healthy, independent, productive Alaskans. AS 47.30.666(a); AS 44.29.140(a).
- Teens who experience depression is a key indicator because of a concern that students experience, or are at risk of experiencing, major life impairment from one or more clinical conditions defining Trust beneficiary status, including: schizophrenia; delusional (paranoid) disorder; mood disorders; anxiety disorders; somatoform disorders; organic mental disorders; personality disorders; and dissociative disorders. AS 47.30.056 (c), (d) and (f).

Additional Information:

Alaska Department of Health and Social Services Division of Behavioral Health.
http://dhss.alaska.gov/dbh/Pages/default.aspx

Alaska Mental Health Board.
http://dhss.alaska.gov/amhb/Pages/default.aspx

Alaska's Youth Risk Behavior Survey (YRBS).
http://dhss.alaska.gov/dph/Chronic/Pages/yrbs/yrbs.aspx

Centers for Disease Control and Prevention (CDC). Adolescent and School Health. Youth Risk Behavior Surveillance System (YRBSS). http://www.cdc.gov/healthyyouth/yrbs/index.htm

Healthy Alaskans 2020 Leading Health Indicator 8: Mental Health: Adolescents
http://ibis.dhss.alaska.gov/indicator/complete_profile/AdolSad.html

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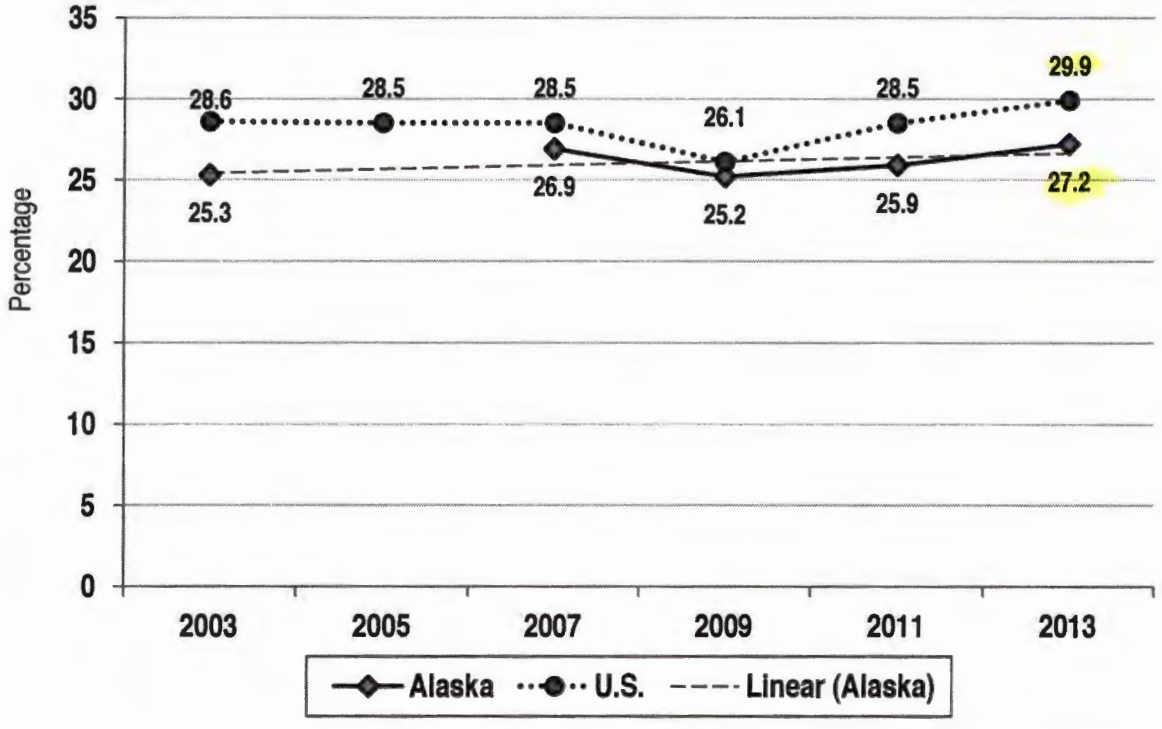
[33] Department of Health and Social Services, Division of Public Health. *2013 Youth Risk Behavior Survey Results.* http://dhss.alaska.gov/dph/Chronic/Documents/School/pubs/2013AKTradHS_Graphs.pdf

Health: Mental Health

8. Teens who Experienced Depression during the Past Year

Percentage of high school students who felt so sad or hopeless almost every day for two weeks or more in a row that they stopped doing some usual activities during the past 12 months, Alaska and U.S., 2003 – 2013



Source: Alaska: Alaska Department of Health and Social Services, Division of Public Health, *Youth Risk Behavior Survey Results*;[30,31]
U.S.: Centers for Disease Control and Prevention (2014). Youth Risk Behavior Surveillance–United States, 2013. *MMWR Surveillance Summaries*, Vol. 63, No. 4. Table 23.[32]

Summary and Explanation:

- According to the 2013 Youth Risk Behavior Survey, 27.2% of Alaskan students in traditional high schools felt so sad or hopeless almost every day for two weeks or more in a row that they stopped doing some usual activities during past 12 months.

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[30] Available at http://dhss.alaska.gov/dph/Chronic/Documents/School/pubs/2013AKTradHS_Graphs.pdf. The Youth Risk Behavior Survey (YRBS) is a national survey developed by the Division of Adolescent and School Health, Centers for Disease Control and Prevention (CDC) in collaboration with 71 state and local departments of education and 19 federal agencies. The survey is a component of a larger national effort to assess priority health risk behaviors that contribute to the leading causes of mortality, morbidity and social problems among youth and adults in the United States. These results are needed to evaluate the effectiveness of programs in reducing negative student behaviors. The survey provides valuable information about positive behaviors among students. In Alaska, survey participation requires parental consent. For more information see: http://dhss.alaska.gov/dph/Chronic/Pages/yrbs/yrbs.aspx.

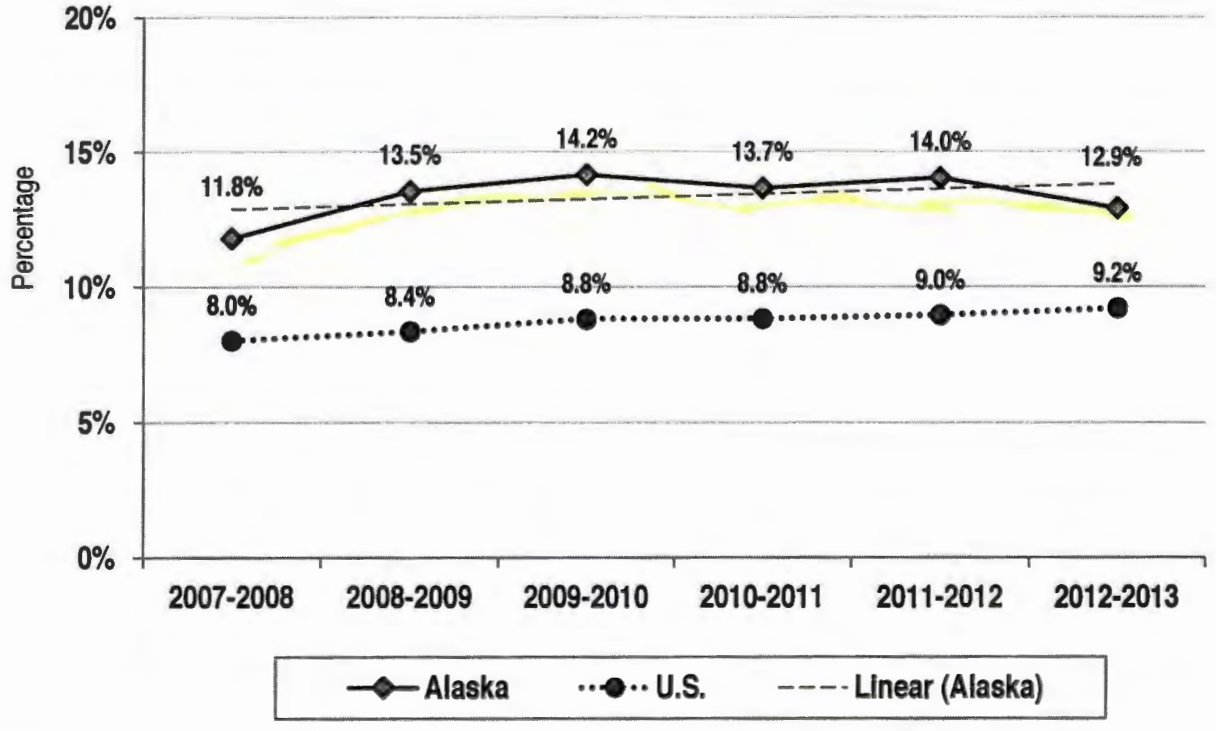
[31] Weighted statewide data is not available for 2005.

[32] Available at http://www.cdc.gov/mmwr/pdf/ss/ss6304.pdf.

Health: Substance Abuse

6. Illicit Drug Use

Percentage of population aged 12 and over engaging in illicit drug use, Alaska and U.S., 2007 – 2013



Source: Alaska and U.S.: Substance Abuse and Mental Health Services Administration (SAMHSA) (2014). *Results from 2013 National Survey on Drug Use and Health.*[21]

Summary and Explanation:

- Illicit drugs, as reported here, include marijuana/hashish, cocaine (including crack), heroin, hallucinogens, inhalants, or prescription-type psychotherapeutics used non-medically.[22]
- Although the percentage of Alaskans ages 12 and older who reported using illicit drugs dropped in 2012-2013 (12.9%), illicit drug use is consistently at least 25% above the national percentage.
- In Alaska, the 18 to 25 age group has the highest rates of illicit drug use.[23]
- The percentage of Alaskans using illicit drugs other than marijuana was 2.9% in 2012-2013. This percentage is lower than the national average of 3.36%.[24]

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[21] Available at http://www.samhsa.gov/data/NSDUH/2013SummNatFindDetTables/Index.aspx.

[22] SAMHSA. *Key Definitions for the 2013 Detailed Tables and National Findings Report.* Available at http://www.samhsa.gov/data/NSDUH/2013SummNatFindDetTables/DetTabs/NSDUH-DetTabsGlossary2013.htm.

[23] SAMHSA, National Survey on Drug Use and Health, *2011-2012 NSDUH State Estimates of Substance Use and Mental Disorders.* Available at http://www.samhsa.gov/data/NSDUH/2k12State/NSDUHsae2012/Index.aspx.

Health: Suicide

1. **Suicide rate per 100,000** (2013).[a]
2. **Serious thoughts of suicide.** Adults aged 18 and older reporting serious thoughts of suicide in the past year (2012-2013).[b]

Health: Substance Abuse

3. **Alcohol-induced deaths per 100,000.** Includes fatalities from alcoholic psychoses, alcohol dependence syndrome, non-dependent abuse of alcohol, alcohol-induced chronic liver disease and cirrhosis, and alcohol poisoning (2013).[a]
4. **Adults who engage in heavy drinking.** Percentage of adults who reported heavy drinking in past 30 days; defined as two or more drinks daily for men and one or more daily for women (2013).[c]
5. **Adults who engage in binge drinking.** Percentage of adults who reported drinking five or more drinks on one occasion in past 30 days (2013).[c]
6. **Population aged 12 and older using illicit drugs.** Percentage of population age 12 and older who report using illicit drugs in the past month, including marijuana/ hashish, cocaine (including crack), heroin, hallucinogens, inhalants, or prescription-type psychotherapeutics used non-medically (2012-2013).[b]

Health: Mental Health

7. **Days of poor mental health in past month (adults).** Mean number of days during the previous 30 days for which respondents aged 18 years or older report that their mental health (including stress, depression, and problems with emotions) was not good (2013).[c]
8. **Teens who experienced depression during past year.** Percentage of high school students who felt so sad or hopeless almost every day for two weeks or more in a row that they stopped doing some usual activities during past 12 months (2013).[d]

Health: Access

9. **Population without health insurance.** Percent of population without health insurance for the entire year (2013).[e]

Safety: Protection

10. **Children abused and neglected, rate per 1,000.** Child victims aged 0-17, unique counts (2013).[f]
11. **Substantiated reports of harm to adults, rate per 1,000.** (FY2014).[g]
12. **Injuries to elders due to falls, rate per 100,000.** Non-fatal injuries, ages 65+, hospitalized 24 hours or more (2013).[h]
13. **Rate of non-fatal traumatic brain injury per 100,000.** Hospitalized 24 hours or more (2013).[h]

Safety: Justice

14. **Percent of incarcerated adults with mental illness or mental disabilities** (2012).[i]
15. **Statewide criminal recidivism rates for incarcerated adults with mental illness or mental disabilities.** Rate of re-entry into ADOC for a new crime occurring within one year of initial date of discharge (2012).[i]
16. **Percent of arrests involving alcohol or drugs.** Arrest offenses with Division of AK State Troopers or Wildlife Troopers that were flagged as being related to alcohol and/or drugs (2013).[j]

Living With Dignity: Housing

17. **Rate of chronic homelessness per 100,000 population.** A person with a disabling condition who has been continuously homeless for a year or more or who has had at least four episodes of homelessness in the past three years is considered chronically homeless (2014).[k]

Living With Dignity: Education

18. **Difference between high school graduation rate for students with and without disabilities.** Statewide cohort graduation rate (2013-2014).[l]
19. **Percent of youth who received special education who are employed and/or enrolled in post-secondary education one year after leaving school** (2013).[m]

Economic Security

20. **Percent of minimum wage income needed for average two-bedroom housing in Alaska.** Affordable housing is defined as not more than 30% of one's gross income (2014).[n]
21. **Average annual unemployment rate.** Rate represents the number unemployed as a percent of the labor force (2013).[o]
22. **Percent of SSI recipients with blindness or disabilities who are working** (2013).[p]

Data Sources

a. Alaska Department of Health and Social Services, Division of Public Health, Bureau of Vital Statistics.

b. Substance Abuse and Mental Health Services Administration (SAMHSA), Office of Applied Studies, National Survey on Drug Use and Health.

c. Alaska Department of Health and Social Services, Division of Public Health, Behavioral Risk Factor Surveillance System; U.S. Centers for Disease Control and Prevention (CDC).

d. Alaska Department of Health and Social Services, Division of Public Health, Youth Risk Behavior Survey; U.S. Centers for Disease Control and Prevention, Youth Risk Behavior Survey.

e. U.S. Census Bureau and Bureau of Labor Statistics, Current Population Survey, *Health Insurance Coverage Status.*

f. Alaska Department of Health and Social Services, Office of Children's Services; Statistical Information. U.S. Department of Health and Human Services, Administration on Children, Youth and Families, Children's Bureau, *Child Maltreatment 2013.*

g. Alaska Department of Health and Social Services, Senior and Disabilities Services, Adult Protective Services.

h. Alaska Department of Health and Social Services, Division of Public Health, Alaska Trauma Registry; U.S. Centers for Disease Control and Prevention (CDC), Injury Prevention & Control, Data & Statistics.

i. Hornby Zeller Associates, Inc. (May 2014), *A Study of Trust Beneficiaries in the Alaska Department of Corrections.*

j. Alaska Public Safety Information Network (APSIN) case data for Alaska Department of Public Safety, Division of Alaska State Troopers and Wildlife Troopers.

k. HUD Continuum of Care Homeless Assistance Programs, *2013 HUD Annual Homeless Assessment Report.*

l. Alaska Department of Education & Early Development, *Statistics and Reports.*

m. Governor's Council on Disabilities & Special Education; Alaska Department of Education & Early Development, *FFY 2012 Annual Performance Report.*

n. National Low Income Housing Coalition (2014). *Out of Reach 2014.*

o. Alaska Department of Labor & Workforce Development, Research and Analysis, Labor Force Data; U.S. Department of Labor, Bureau of Labor Statistics, Labor Force Statistics from the Current Population Survey.

p. U.S. Social Security Administration, Office of Retirement and Disability Policy, *SSI Annual Statistical Report, 2013.* Table 41, Recipients Who Work.

Alaska Population Rates: Alaska Department of Labor & Workforce Development, Population Estimates.

Prevalence Data – Sources

Mental Illness (SMI and SED). WICHE Mental Health Program and Holzer, Charles (2008). *2006 Behavioral Health Prevalence Estimates in Alaska: Serious Behavioral Health Disorders in Households.*

Alzheimer's Disease (2014 estimate). Alaska Department of Health and Social Services. *Alaska's Roadmap to Address Alzheimer's Disease and Related Dementias* (12/31/14).

Traumatic Brain Injury. University of Alaska Center for Human Development (2003). *The Alaska Traumatic Brain Injury (TBI) Planning Grant Needs and Resources Assessment, June 2001 – January 2003* and AK Brain Injury Network (via e-mail 12/16/11).

Developmental Disabilities. Gollay, E. (1981). *Summary Report on the Implications of Modifying the Definition of a Developmental Disability.* U.S. Department of Health, Education and Welfare; and GCDSE (via e-mail 10/21/11).

Alcohol dependence. U.S. DHHS, SAMHSA, National Survey on Drug Use and Health. Estimates based on 2010-2011 NSDUHs.

- According to the National Survey on Drug Use and Health (NSDUH), Alaska ranked 7th among the states and D.C. for illicit drug use in 2012-2013 in the 12 and older age group. However, when illicit drug use other than marijuana is taken into account, Alaska is not in the top ten.[25]
- According to the 2013 Alaska Youth Risk Behavior Survey of students in grades 9–12:
  - 39.0% had used marijuana one or more times in their life;
  - 19.7% had used marijuana one or more times during the past 30 days;
  - 13.5% had taken a prescription drug (such as OxyContin, Percocet, codeine, etc.) without a doctor's prescription one or more times in their life; and,
  - 6.6% had sniffed glue, breathed the contents of aerosol spray cans, or inhaled paint or sprays to get high one or more times in their life.[26]
- Drug-induced deaths can be expressed as Years of Potential Life Lost (YPLL), an estimate of the average time a person would have lived had he/she not died prematurely due to drug use. According to a 2009 Alaska Bureau of Vital Statistics report, drug-induced deaths resulted in 4,219.5 years of potential life lost, or an average 32 years per decedent.[27]

Statutory Information:

- Per Alaska Statute, the Department of Health and Social Services, the Alaska Mental Health Trust Authority and partner organizations work cooperatively to plan, budget and implement an integrated comprehensive mental health program for Alaska. AS 47.30.660(a); AS 47.30.011(b); AS 37.14.003(a); AS 47.30.046(a).
- The rate of illicit drug use by Alaskans 12 and older is a key indicator because individuals who use illicit drugs can experience, or be at heightened risk of experiencing, major life impairment from with one or more clinical conditions defining Trust beneficiary status, including: schizophrenia; delusional (paranoid) disorder; mood disorders; anxiety disorders; somatoform disorders; organic mental disorders; personality disorders; dissociative disorders; and other psychotic or severe and persistent mental disorders manifested by behavioral changes and symptoms of comparable severity to those manifested by persons with (such) mental disorders. AS 47.30.056(c-d).

Additional Information:

Alaska Department of Health and Social Services, Division of Behavioral Health. http://dhss.alaska.gov/dbh/Pages/default.aspx

Advisory Board on Alcoholism and Drug Abuse. http://dhss.alaska.gov/abada/

Alaska's Behavioral Risk Factor Surveillance System (BRFSS). http://dhss.alaska.gov/dph/Chronic/Pages/brfss/default.aspx

Alaska Youth Risk Behavior Survey. http://dhss.alaska.gov/dph/Chronic/Pages/yrbs/yrbs.aspx

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[24] SAMHSA, National Survey on Drug Use and Health, *2012-2013 NSDUH State Estimates of Substance Use and Mental Disorders.* Available at http://www.samhsa.gov/data/sites/default/files/NSDUHStateEst2012-2013-p1/ChangeTabs/NSDUHsaeShortTermCHG2013.pdf

[25] SAMHSA, National Survey on Drug Use and Health, *2012-2013 NSDUH State Estimates of Substance Use and Mental Disorders.* Available at http://www.samhsa.gov/data/sites/default/files/NSDUHStateEst2012-2013-p1/ChangeTabs/NSDUHsaeShortTermCHG2013.pdf.

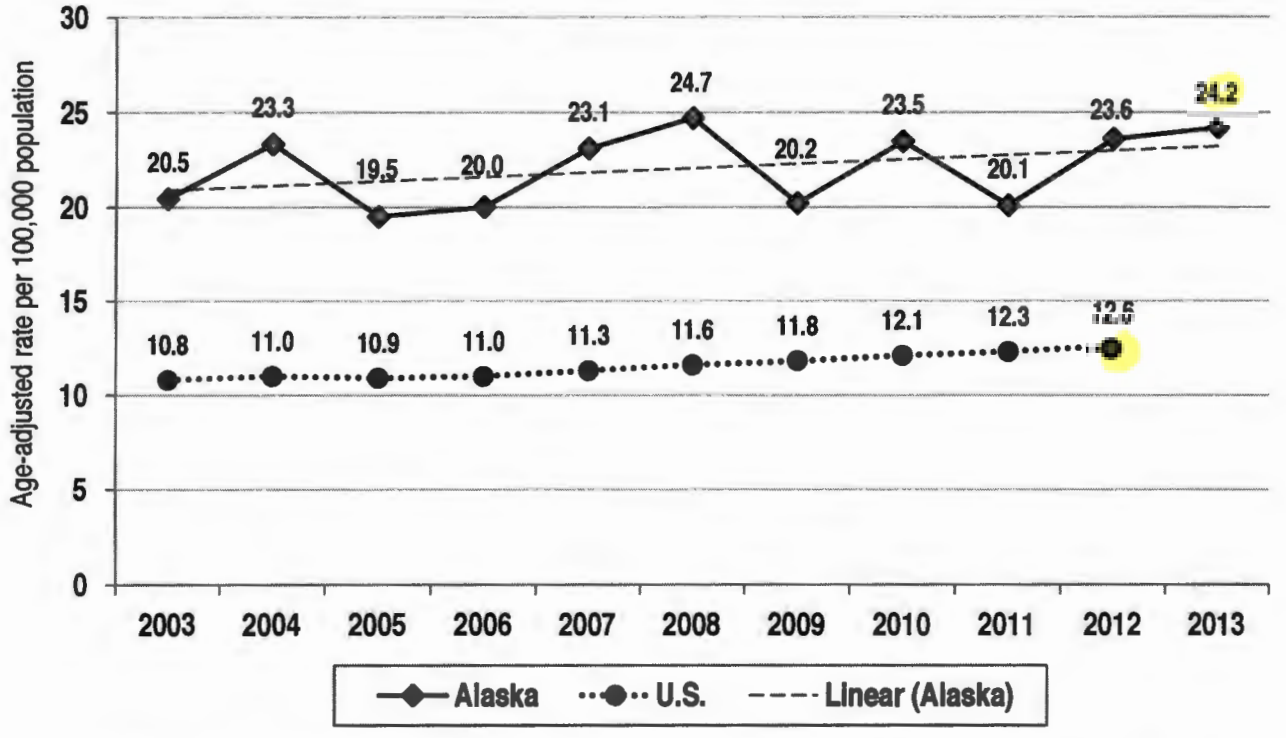
[26] Alaska Youth Risk Behavior Survey. Available at: http://dhss.alaska.gov/dph/Chronic/Pages/yrbs/yrbsresults.aspx.

[27] Alaska Department of Health and Social Services, Bureau of Vital Statistics. *2009 Annual Report.* Available at http://dhss.alaska.gov/dph/VitalStats/Documents/PDFs/2009/2009_Annual_Report.pdf.

Health: Suicide

1. Suicide Rate

Suicide rate, Alaska and U.S., 2003 – 2013



Source: Alaska: Alaska Department of Health and Social Services, Bureau of Vital Statistics (via e-mail 10/24/2014); U.S.: Centers for Disease Control and Prevention (2013). *National Vital Statistics Report*, Vol. 61, No. 6, Table 11.[1]

Summary and Explanation:

- Between 2000 and 2013, the age-adjusted rate of death by suicide in Alaska averaged nearly twice the U.S. rate.
- During the period 2003 – 2008, the suicide rate for Alaska Native people (40.4 per 100,000) was more than twice that of Alaska non-Natives (17.7 per 100,000).[2]
- Suicide rates during this period were highest for Alaska Native people living in Northwest Arctic (93.1 per 100,000) and Norton Sound (77.2 per 100,000). Rates were significantly higher in non-"hub communities" (60 per 100,000) than in "hub communities" (25.8 per 100,000).[2]
- According to interviews with families of 56 Alaskans who died by suicide:
  - More than half of the decedents had a disability or illness that made it difficult for them to take care of normal daily activities.

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1 National Vital Statistics Reports, Forthcoming. Available at: www.cdc.gov/nchs/data/nvsr/nvsr63/nvsr63_09.pdf.

2 Alaska Department of Health and Social Services (July 30, 2012). *Epidemiology Bulletin: Characteristics of Suicide Among Alaska Native and Alaska non-Native People, 2003-2008*. Available at http://www.epi.hss.state.ak.us/bulletins/docs/rr2012_01.pdf.

Key to Scorecard symbols

Alaska vs. U.S. % Difference		Alaska Year-to-Year Trend		Assessment		Status
If	Less than 15%	and	Getting better	then	Satisfactory	✓
If	Less than 15%	and	Getting worse or flat	then	Uncertain	⟺
If	Greater than 15% to the positive	and	Getting better or flat	then	Satisfactory	✓
If	Greater than 15% to the positive	and	Getting worse	then	Uncertain	⟺
If	Greater than 15% to the negative	and	Getting better	then	Uncertain	⟺
If	Greater than 15% to the negative	and	Getting worse or not clear	then	Needs Improvement	✗
If	Unacceptably large rate to the negative	then	Trend becomes irrelevant	then	Needs Improvement	✗

How did we determine the status of Scorecard indicators?

The Alaska Department of Health and Social Services, in conjunction with the Trust and the related advisory boards and commission, has produced this Alaska Scorecard annually since 2008.

To determine the status of an indicator, the most current Alaska data is compared to U.S. data to see if it is more than 15% higher or lower. Then, the year-to-year Alaska data is examined to see if it shows a clear trend or if it varies so much that a clear trend cannot be determined.

Between 2013 and 2014 the status of most indicators remained the same; one moved from "needs improvement" to "uncertain," one moved from "uncertain" to "satisfactory," and one moved from "uncertain" to "needs improvement."

Status information by Scorecard indicator

1. **Suicide rate per 100,000.** The 2013 Alaska rate is 92% higher than the U.S. rate, and the Alaska rate has varied too much year-to-year to show a clear trend. The resulting status is "needs improvement." This is the same as last year's Scorecard status.
2. **Serious thoughts of suicide.** The 2012-2013 Alaska rate is 8% higher than the U.S. rate, and the Alaska rate has remained generally flat. The status is "uncertain." This is better than last year's Scorecard status.
3. **Alcohol-induced deaths.** The 2013 Alaska rate is 234% higher than the U.S. rate, and the Alaska data show no clear trend. The status is "needs improvement." This is the same as last year's Scorecard status.
4. **Heavy drinking (adults).** The 2013 Alaska rate is 24% higher than the U.S. rate, and the Alaska rate does not show a clear trend, so the status is "needs improvement." This is worse than last year's Scorecard status.
5. **Binge drinking (adults).** The 2013 Alaska rate is 10% higher than the U.S. rate, and the yearly Alaska data show no clear trend, so the status is "uncertain." This is the same as last year's Scorecard status.
6. **Illicit drug users.** The 2012-2013 Alaska rate is 40% higher than the U.S. rate, and the yearly Alaska data show no clear trend, so the status is "needs improvement." This is the same as last year's Scorecard status.
7. **Days of poor mental health.** The 2013 Alaska rate is 16% lower than the U.S. rate and the Alaska data show no clear trend, so the status is "satisfactory." This is better than last year's Scorecard status.
8. **Teens that experienced depression.** Although the 2013 Alaska rate is 9% below the U.S. rate, the rate is unacceptably high, so the status is "needs improvement." This is the same as last year's Scorecard status.
9. **Population without health insurance.** The 2013 Alaska rate is 28% higher than the U.S. rate, and the Alaska data show an increase in the rate of population without insurance, so the status is "needs improvement." This is the same as last year's Scorecard status.

10. **Children abused and neglected.** While the Alaska data show as possible downward trend, the 2013 Alaska rate is 42.9% higher than the U.S. rate. The status is "needs improvement." This is the same as last year's Scorecard status.
11. **Substantiated reports of harm to adults (rate per 1,000).** There is not enough information to identify a trend in Alaska data and no comparable U.S. data; the status is "uncertain." This is the same as last year's Scorecard status.
12. **Injuries to elders due to falls.** The 2013 Alaska rate is 28% below the U.S. rate, and the data show a possible downward trend; the status is "satisfactory." This is the same as last year's Scorecard status.
13. **Non-fatal traumatic brain injury.** Although there are no U.S. data for comparison, the Alaska rate appears to have improved in the past decade. The status is "satisfactory." This is the same as last year's Scorecard status.
14. **Incarcerated adults with mental illness or mental disabilities.** There are not enough Alaska data to identify a trend. However, the consensus is that the rate is unacceptably high, so the status is "needs improvement." This is the same as last year's Scorecard status.
15. **Criminal recidivism for incarcerated adults with mental illness or mental disabilities.** There are not enough Alaska data to identify a trend; there are no comparable U.S. data. The status is "uncertain." This is the same as last year's Scorecard status.
16. **Arrests involving alcohol or drugs.** The Alaska rate has decreased in the last year and over the past six years; however, this may be due to record keeping. There are no U.S. data for comparison. The status is "uncertain." This is the same as last year's Scorecard status.
17. **Chronic homelessness.** The 2014 Alaska rate is 6% higher than the U.S. rate, but the Alaska data vary too much year-to-year to show a clear trend, so the status is "uncertain." This is the same as last year's Scorecard status.
18. **Difference between high school graduation rate for students with and without disabilities.** The 2013-2014 rate shows a greater difference than the previous year; however, there is no evidence of a trend. The status is "uncertain." This is the same as last year's Scorecard status.
19. **Percent of youth who received special education and are employed and/or enrolled in post-secondary education.** There is not enough information to identify a trend in Alaska data and no comparable U.S. data; the status is "uncertain." This is the same as year's Scorecard status.
20. **Percent of Minimum Wage needed for Average Housing.** The consensus is that the percentage of income spent on housing in Alaska unacceptably high, so the status is "needs improvement." This is the same as last year's Scorecard status.
21. **Average annual unemployment.** The 2013 Alaska rate is 12% below the U.S. rate and the data show a possible downward trend; the resulting status is "satisfactory." This is the same as last year's Scorecard status.
22. **Percent of SSI recipients who are blind or disabled and are working.** The 2013 Alaska rate is 58% higher than the U.S. rate; the status is "satisfactory." This is the same as last year's Scorecard status.

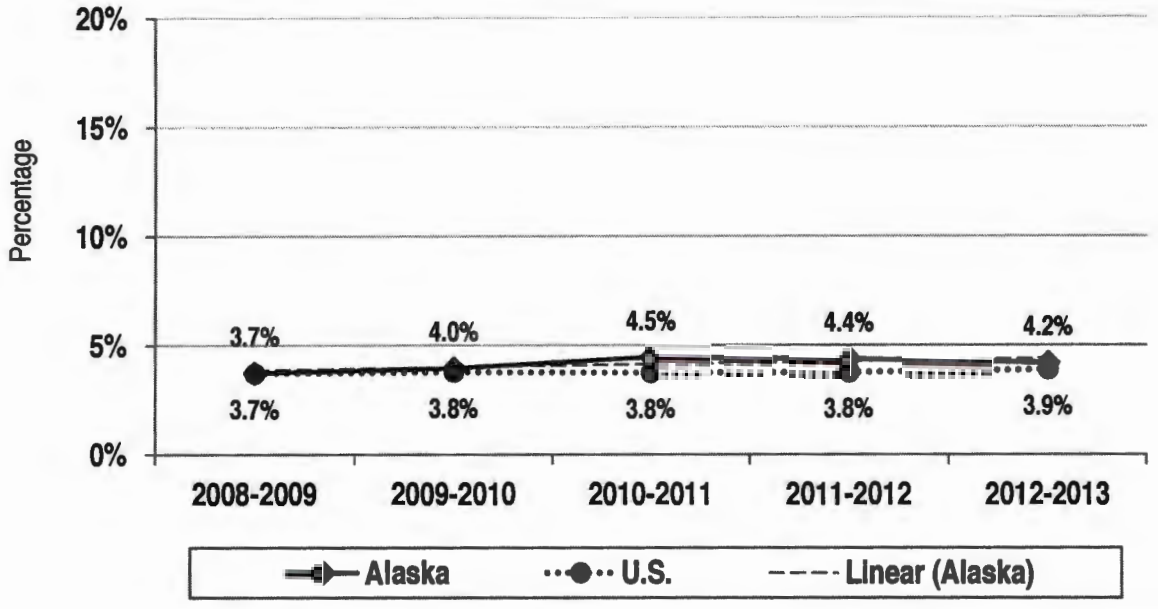
For further information and data, refer to the Drilldown section of the scorecard at

http://dhss.alaska.gov/dph/HealthPlanning/Pages/scorecard

Health: Suicide

2. Serious thoughts of suicide

Suicidal thoughts in the past year, adults aged 18 or older
Alaska and U.S., 2008 – 2013



Source: Alaska and U.S.: Substance Abuse and Mental Health Services Administration (SAMHSA), Center for Behavioral Health Statistics and Quality. *National Survey on Drug Use and Health (NSDUH)*[4]

Summary and Explanation:

- The National Survey on Drug Use and Health (NSDUH) measures the prevalence of suicidal thoughts and behavior among civilian, noninstitutionalized adults aged 18 or older in the United States. This question asks all adult respondents if at any time during the past 12 months they had serious thoughts of suicide.
- According to the 2013 Youth Risk Behavior Survey, 8.4% of Alaskan students in traditional high schools attempted suicide one or more times in the past year.[5]

Statutory Information:

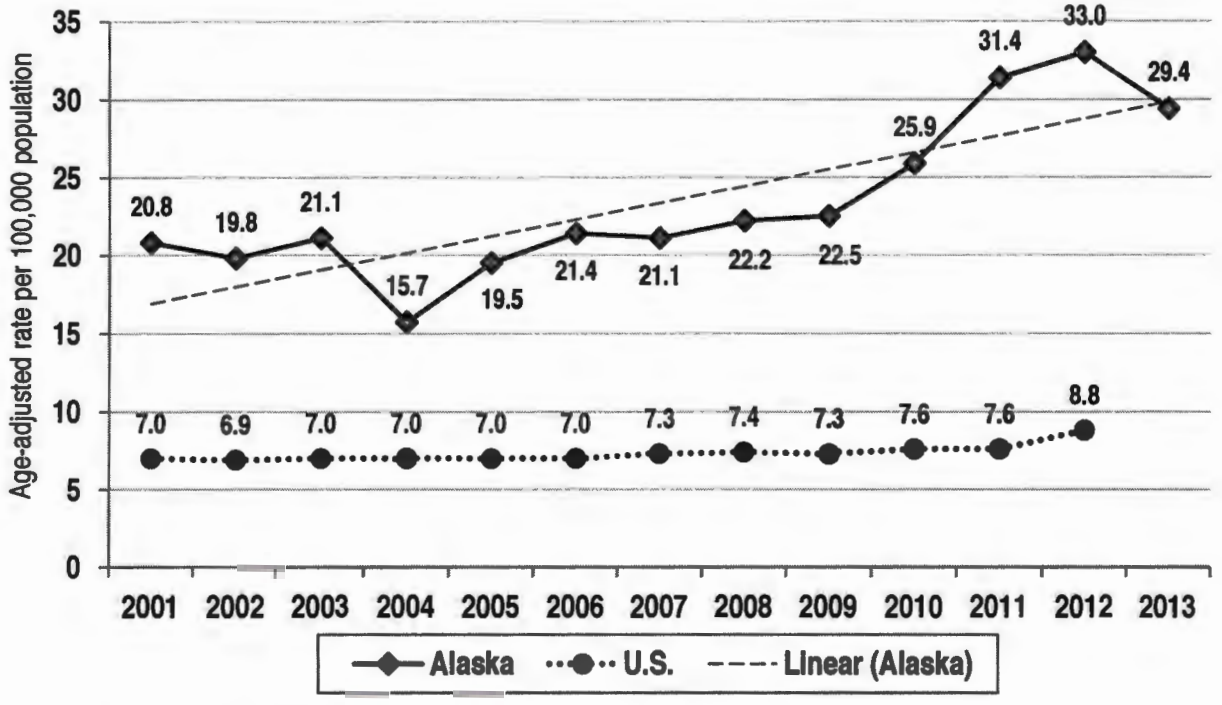
- Per Alaska Statute, the Department of Health and Social Services, the Alaska Mental Health Trust Authority and partner organizations work cooperatively to plan, budget and implement an integrated comprehensive mental health program for Alaska. (AS 47.30.660(a); AS 47.30.011(b); AS 37.14.003(a); AS 47.30.046(a).
- Serious thoughts of suicide is considered a key indicator because of the concern that, because they experience a major life impairment from one or more of the clinical conditions defining beneficiary status, Trust beneficiaries may be at a higher risk of suicide. These clinical conditions

4 Available at: http://www.samhsa.gov/data/sites/default/files/NSDUHmhfr2013/NSDUHmhfr2013.pdf.
5 Alaska Department of Health and Social Services, Division of Public Health, *2013 Alaska Youth Risk Behavior Survey Results:* Available at http://dhss.alaska.gov/dph/Chronic/Documents/School/pubs/2013AKTradHS_Graphs.pdf.

Health: Substance Abuse

3. Alcohol-Induced Deaths

Alcohol induced deaths, Alaska and U.S., 2001 – 2013



Source: Alaska: Department of Health and Social Services, Division of Public Health, Bureau of Vital Statistics (via e-mail 10/24/2014);
U.S.: *National Vital Statistics Report*, Vol. 63, No. 9, Table 11.[6]

Summary and Explanation:

- Alcohol-induced deaths include fatalities from causes such as degeneration of the nervous system due to alcohol, alcoholic liver disease, gastritis, myopathy, pancreatitis, poisoning, and more. It does not include accidents, homicides, and other causes indirectly related to alcohol use.[7]

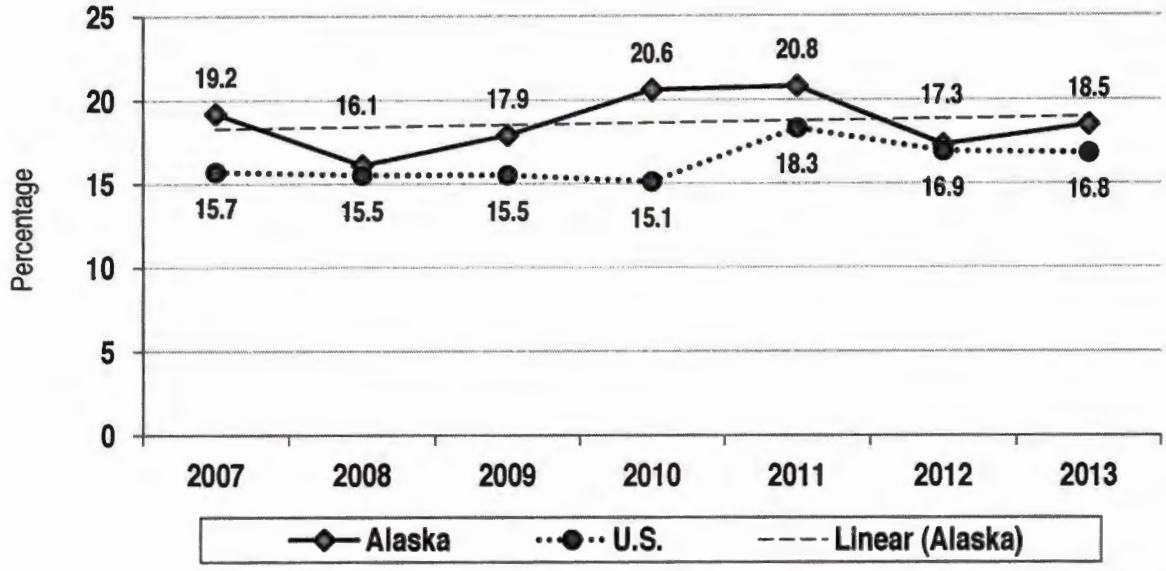
[6] Available at: http://www.cdc.gov/nchs/data/nvsr/nvsr63/nvsr63_09.pdf.

[7] The list of codes for alcohol-induced causes was expanded in the 2003 data year to be more comprehensive. Causes of death attributable to alcohol-induced mortality include ICD-10 codes E24.4, Alcohol-induced pseudo-Cushing's syndrome; F10, Mental and behavioral disorders due to alcohol use; G31.2, Degeneration of nervous system due to alcohol; G62.1, Alcoholic polyneuropathy; G72.1, Alcoholic myopathy; I42.6, Alcoholic cardiomyopathy; K29.2, Alcoholic gastritis; K70, Alcoholic liver disease; K86.0, Alcohol-induced chronic pancreatitis; R78.0, Finding of alcohol in blood; X45, Accidental poisoning by and exposure to alcohol; X65, Intentional self-poisoning by and exposure to alcohol; and Y15, Poisoning by and exposure to alcohol, undetermined intent. Alcohol-induced causes exclude newborn deaths associated with maternal alcohol use. See CDC (2008). *National Vital Statistics Reports*, Volume 56, Number 10, p. 109. Available at http://www.cdc.gov/nchs/data/nvsr/nvsr56/nvsr56_10.pdf.

Health: Substance Abuse

5. Adults who Engage in Binge Drinking

Percentage of adults who engage in binge drinking, Alaska and U.S., 2007 – 2013



Source: Alaska: Department of Health and Social Services, Division of Public Health. Behavioral Risk Factor Surveillance Survey (BRFSS) (via e-mail 11/21/2014).[14]
U.S.: Centers for Disease Control and Prevention (CDC). Behavioral Risk Factor Surveillance System.[15]

Summary and Explanation:

- Binge drinking is defined as having five or more drinks (men) or four or more drinks (women) on one or more occasions in the past 30 days.[16]
- Binge drinking in Alaska is significantly higher among men (28%) than among women (13%).[17]
- According to the 2013 Youth Risk Behavior Survey (YRBS), 13% of Alaska's high school students engaged in binge drinking during the past 30 days.[18]
- Youth who begin drinking at age 14 or younger are four times more likely to develop dependence.[19]

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[14] With the reporting of 2011 BRFSS data, the CDC introduced a new method of sampling (to include cell phone as well as landline phone numbers) and a new weighting methodology referred to as "raking." These changes improve the overall representativeness of the BRFSS data, and provide a more accurate reflection of the health behaviors and conditions of the population. These changes in methods mean changes in the way data can be used. Trend analyses will eventually focus on years of data (2011 and later) that include both landline and cell phone respondents, and which are weighted using raking methodology.

[15] Available at http://apps.nccd.cdc.gov/brfss/.

[16] Centers for Disease Control and Prevention. *Alcohol and Public Health, Frequently Asked Questions*. Available at http://www.cdc.gov/alcohol/faqs.htm#heavyDrinking.

[17] Alaska Department of Health and Social Services, Division of Public Health (2010). *Alaska BRFSS Highlights*. http://dhss.alaska.gov/dph/Chronic/Documents/brfss/pubs/BRFSSsum10.pdf.

[18] Percent of YRBS respondents who had five or more drinks of alcohol in a row, that is, within a couple of hours, on at least one day during the 30 days before the survey. See: http://dhss.alaska.gov/dph/Chronic/Documents/School/pubs/2013YRBS_PreliminaryHighlights.pdf.

- The BRFSS does not collect data from those who are living in an institutional setting. Consequently, those who are experiencing poor mental health days and are living in an institutional setting are not included in these data.

Statutory Information:

- Per Alaska Statute, the Department of Health and Social Services, the Alaska Mental Health Trust Authority and partner organizations work cooperatively to plan, budget and implement an integrated comprehensive mental health program for Alaska. AS 47.30.660(a); AS 47.30.011(b); AS 37.14.003(a); AS 47.30.046(a).
- The Statewide Suicide Prevention Council was established by the Alaska Legislature in 2001 and is responsible for advising legislators and the Governor on ways to improve Alaskans' health and wellness by reducing suicide, and improving public awareness of suicide and risk factors, enhancing suicide prevention. AS 44.29.350(a).
- The Alaska Mental Health Board and the Advisory Board on Alcoholism were established by the Alaska Legislature in 1995 and are jointly charged with planning and coordinating behavioral health services funded by the State of Alaska. The joint mission of AMHB and ABADA is to advocate for programs and services that promote healthy, independent, productive Alaskans. AS 47.30.666(a); AS 44.29.140(a).
- Days with poor mental health is a key indicator because there is a concern that persons experiencing days of poor mental health may be at heightened risk of experiencing, major life impairment from with one or more clinical conditions defining Trust beneficiary status, including: schizophrenia; delusional (paranoid) disorder; mood disorders; anxiety disorders; somatoform disorders; organic mental disorders; personality disorders; and dissociative disorders. AS 47.30.056(c), (d) and (g).

Additional Information:

Alaska Department of Health and Social Services, Division of Behavioral Health.
http://dhss.alaska.gov/dbh/Pages/default.aspx

Alaska's Behavioral Risk Factor Surveillance System (BRFSS).
http://dhss.alaska.gov/dph/Chronic/Pages/brfss/default.aspx

Alaska Mental Health Board.
http://dhss.alaska.gov/amhb/Pages/default.aspx

Healthy Alaskans 2020 Leading Health Indicator 9: Mental Health
http://ibis.dhss.alaska.gov/indicator/complete_profile/HlthStatMent.html

Safety: Justice

14. Percent of Incarcerated Adults with Mental Illness or Mental Disabilities

Summary and Explanation:

- Approximately 65 percent of adults incarcerated in the Alaska correctional system are Trust beneficiaries with mental illness and/or mental disabilities, mostly incarcerated for misdemeanors. This is significantly higher than the 42 percent rate identified in 2007.[55,56]
- The Alaska Department of Corrections has become the largest provider of mental health services in the State of Alaska.[57]
- Alaska has the highest growth rate for incarceration per capita in the U.S.; since 2000, the average number of sentenced inmates in Alaska has increased each year an average of 2.4% per year higher than the national average.[58]
- Trust beneficiaries are at increased risk of involvement with the criminal justice system both as defendants and as victims. Limitations and deficiencies in the community emergency response, treatment, and support systems make criminal justice intervention the default emergency response to the conditions and resulting actions of many Trust beneficiaries.[59]
- Of incarcerated Trust beneficiaries with identifiable mental health disorders, 70.1 percent were substance abuse-related.[60]
- The median length of stay for Trust beneficiaries is significantly longer than for other offenders. For those committing felonies, it is double that of a non-Trust offender; for misdemeanors, it is 150 percent longer.[61]

Statutory Information:

- Per Alaska Statute, the Department of Health and Social Services, the Alaska Mental Health Trust Authority and partner organizations work cooperatively to plan, budget and implement an integrated comprehensive mental health program for Alaska. AS 47.30.660(a); AS 47.30.011(b); AS 37.14.003(a); AS 47.30.046(a).

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55 Hornby Zeller Associates, Inc. (December 2007). *A Study of Trust Beneficiaries in the Alaska Department of Corrections.* http://www.mhtrust.org/layouts/mhtrust/files/documents/reports_studies/DOC%20Study%20of%20Trust%20Beneficiaries%20-%20Exec%20Summary.pdf

56 Hornby Zeller Associates, Inc. (May 2014). *Trust Beneficiaries in Alaska's Department of Corrections.* http://www.mhtrust.org/layouts/mhtrust/files/documents/focus_DisabilityJustice/ADOC%20Trust%20Beneficiaries%20May%202014%20FINAL%20PRINT.pdf

57 Ibid.

58 Ibid.

59 Alaska Mental Health Trust, Disability Justice Focus Area (2008). *Justice for Trust Beneficiaries Initiative.* http://www.mhtrust.org/layouts/mhtrust/files/documents/focus_DisabilityJustice/Disability%20Justice%20Planning_Overview_%20Implementation_Strategies_.pdf.

60 Hornby Zeller Associates, Inc. (May 2014). *Trust Beneficiaries in Alaska's Department of Corrections.* http://www.mhtrust.org/layouts/mhtrust/files/documents/focus_DisabilityJustice/ADOC%20Trust%20Beneficiaries%20May%202014%20FINAL%20PRINT.pdf

61 Ibid.

- The percent of incarcerated adults with mental illness or mental disabilities is a key indicator because it illustrates the magnitude and effects of major life impairments suffered by persons who experience clinical conditions defining Trust beneficiary status. AS 47.30.056(b-c).
- This rate is also a key indicator because it illustrates the significant economic costs related to mental health with regard to incarceration of Trust beneficiaries. Finally, it is a key indicator because it highlights the need for and economic benefits of timely provision (i.e., prior to the need for incarceration) of reasonable levels of necessary services for people at risk due to mental illness, substance abuse, developmental disabilities, and/or traumatic brain injury. Services to be provided include alcoholism services; housing support services; and vocational services, including prevocational services, work adjustment, supported work, sheltered work, and training in which participants achieve useful work experience. AS 47.30.056(i)(1) and (i)(2)(I).

Additional Information:

Alaska Department of Health and Social Services, Division of Behavioral Health.
http://dhss.alaska.gov/dbh/Pages/default.aspx

Alaska Department of Health and Social Services, Division of Juvenile Justice.
http://dhss.alaska.gov/djj/

Alaska Department of Corrections.
http://doc.alaska.gov/

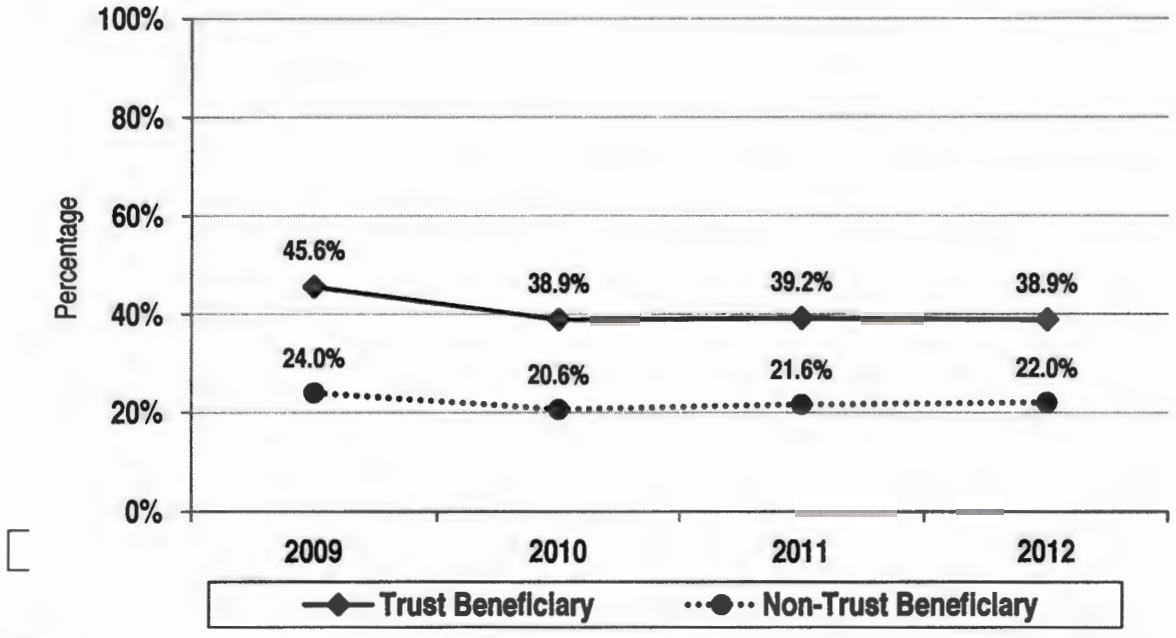
Alaska Mental Health Board.
http://dhss.alaska.gov/amhb/

Alaska Mental Health Trust, Disability Justice Focus Area.
http://www.mhtrust.org/layouts/mhtrust/files/documents/focus_DisabilityJustice/Disability%20Justice%20Planning_Overview_%20Implementation_Strategies_.pdf

Safety: Justice

15. Criminal Recidivism Rates for Incarcerated Adults with Mental Illness or Mental Disabilities

Recidivism Rates for Incarcerated Adults in Alaska, 2009 – 2012



Source: Hornby Zeller Associates, Inc. (May 2014). *Trust Beneficiaries in Alaska's Department of Corrections.*

Summary and Explanation:

- The criminal recidivism rate within the first year of release for Trust beneficiaries averaged 40.9 percent between the years 2009-2012, while the rate for other offenders released (from Alaska Department of Corrections) averaged 22 percent during the same period according to the 2014 study.[62]
- Trust beneficiaries are more likely to recidivate during the first six months post-release.[63]
- Having a criminal history and a substance abuse disorder increased the odds of a Trust beneficiary recidivating.[64]
- Nome had the highest recidivism rate at 50.3 percent.[65]

[62] Hornby Zeller Associates, Inc. (May 2014). *Trust Beneficiaries in Alaska's Department of Corrections.* Available at: http://www.mhtrust.org/layouts/mhtrust/files/documents/focus_DisabilityJustice/ADOC%20Trust%20Beneficiaries%20May%202014%20FINAL%20PRINT.pdf.

[63] Ibid.

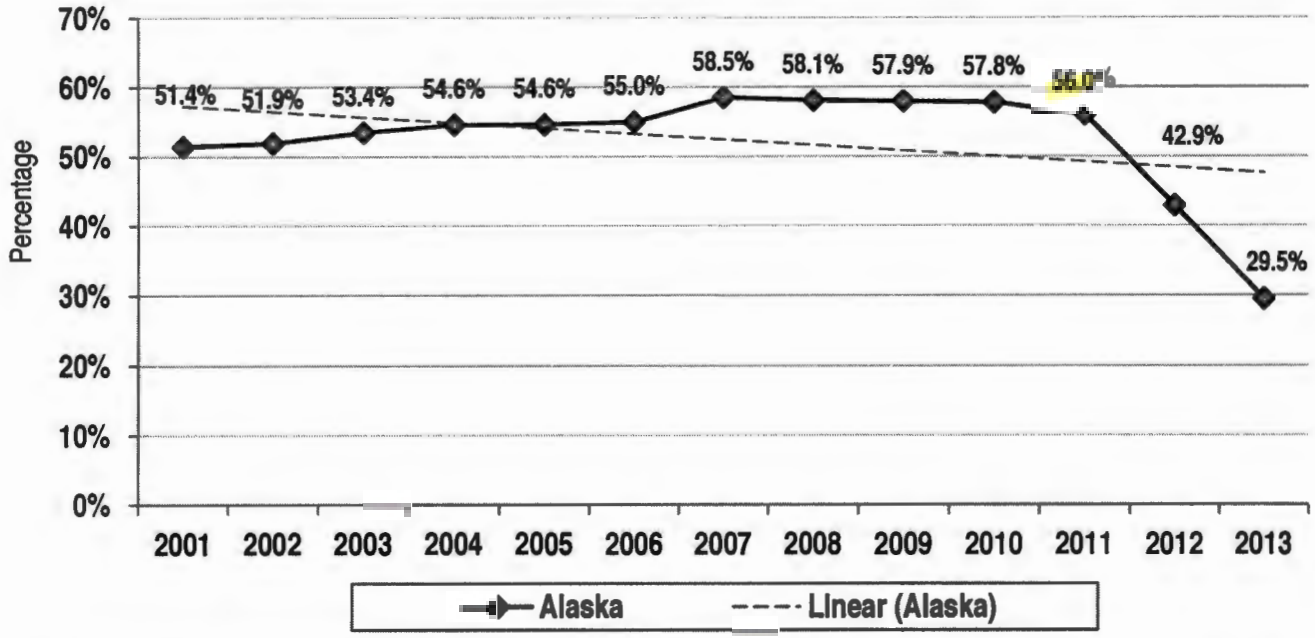
[64] Ibid.

[65] Ibid.

Safety: Justice

16. Percent of Arrests Involving Alcohol or Drugs

Percentage of Total Arrests Flagged as Involving Alcohol or Drugs, Alaska, 2001 – 2013



Source: Alaska Public Safety Information Network (APSIN) case data for Alaska Department of Public Safety, Division of Alaska State Troopers and Wildlife Troopers (via e-mail 10/28/2014).

Summary and Explanation:

- The percentage of arrest offenses flagged by State Troopers or Wildlife Troopers as being related to alcohol or drugs was 29.5% in 2013; however, this may be attributed to a change in the records management system.[66]
- This chart does not include charges by local jurisdictions within the state, which are the source of most arrests. For related data in the Anchorage Municipality, refer to the Anchorage Safety Patrol and Center.[67]

Statutory Information:

- Per Alaska Statute, the Department of Health and Social Services, the Alaska Mental Health Trust Authority and partner organizations work cooperatively to plan, budget and implement an integrated comprehensive mental health program for Alaska. AS 47.30.660(a); AS 47.30.011(b); AS 37.14.003(a); AS 47.30.046(a).

[66] In FY13, DPS transitioned to a new records management system which necessitated the blending of data between the old system and the new system. As a result, some anomalies were discovered in the ability to retrieve comprehensive, accurate statistics, this trend is anticipated this to continue through FY14.

[67] http://www.muni.org/Departments/health/services/Pages/AnchorageSafetyPatrol.aspx.

- The percent of arrests involving alcohol or drugs is a key indicator because it illustrates the magnitude and effects of major life impairments suffered by persons who experience clinical conditions defining Trust beneficiary status. AS 47.30.056(b-c). It is also a key indicator because it illustrates the significant costs related to mental health with regard to Public Safety resources. Finally, it is a key indicator because it highlights the need for and economic benefits of timely provision (i.e., prior to the need for arrest) of reasonable levels of necessary services for people at risk due to mental illness, substance abuse, developmental disabilities, and/or Traumatic Brain Injury. AS 47.30.056(i)(1) and (i)(2)(I).

Additional Information:

Alaska Department of Health and Social Services, Division of Behavioral Health.
http://dhss.alaska.gov/dbh/Pages/default.aspx

Alaska Department of Corrections.
http://doc.alaska.gov/

Alaska Department of Public Safety, Division of Alaska State Troopers.
http://www.dps.state.ak.us/AST/

Alaska Mental Health Trust, Disability Justice Focus Area.
http://www.mhtrust.org/layouts/mhtrust/files/documents/focus_DisabilityJustice/Disability%20Justice%20Planning_Overview_%20Implementation_Strategies_.pdf

brought more people out of the shadows to be counted; and (3) new information received from Immaculate Conception Church's Breadline soup kitchen in Fairbanks.[70]

- According to the Substance Abuse and Mental Health Services Administration (SAMHSA), about 30 percent of chronically homeless persons have mental health conditions, and about half also have co-occurring substance use issues.[71]
- Families are an increasingly represented among Alaska's homeless, and Alaska's composite rank for risk of child homelessness is 23rd among the 50 states. Homeless children are four times as likely to have delayed development, twice as likely to have learning disabilities, and eight times more likely to repeat a grade. They also have double the rate of emotional and behavioral problems and higher rates of physical disabilities and ailments such as asthma, and ADHD.[72]

Statutory Information:

- Per Alaska Statute, the Department of Health and Social Services, the Alaska Mental Health Trust Authority and partner organizations work cooperatively to plan, budget and implement an integrated comprehensive mental health program for Alaska. AS 47.30.660(a); AS 47.30.011(b); AS 37.14.003(a); AS 47.30.046(a).
- The rate of chronic homelessness is a key indicator because it illustrates the magnitude and effects of major life impairments suffered by persons who experience clinical conditions defining Trust beneficiary status. AS 47.30.056(b-c). It also highlights the need for and benefits of timely provision of services for people at risk of homelessness due to mental illness, substance abuse developmental disabilities, and/or brain injury. These services include mental health and substance use disorder treatment, housing support, and vocational rehabilitation, including prevocational rehabilitation, work adjustment, supported work, sheltered work, and training in which participants achieve useful work experience. AS 47.30.056(i)(1) and (i)(2)(I).

Additional Information:

Alaska Housing Finance Corporation. http://www.ahfc.us/home/index.cfm

Alaska Mental Health Trust. *Affordable Housing Focus Area Fact Sheet.* http://www.mhtrust.org/layouts/mhtrust/files/documents/focus_affordablehousing/Housing%20Fact%20Sheet%20Housing%20Jan%202013.pdf

Alaska Homeless Management Information System. http://www.anchoragehomeless.org/hmis

SAMHSA Homelessness Resource Center. http://homeless.samhsa.gov/

U.S. Interagency Council on Homelessness. *People Experiencing Chronic Homelessness.* http://www.usich.gov/population/chronic

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[70] Alaska Housing Finance Corporation *(via e-mail correspondence with K. Duncan, 11/28/2008).*

[71] SAMHSA (2011). *Current Statistics on the Prevalence and Characteristics of People Experiencing Homelessness in the United States.* Available at http://homeless.samhsa.gov/ResourceFiles/hrc_factsheet.pdf.

[72] The National Center on Family Homelessness (2014). *America's Youngest Outcasts.* Available at http://new.homelesschildrenamerica.org/mediadocs/280.pdf.

group by the number in the cohort group For example, the 2011 four-year cohort group is defined as all students who first entered grade nine in 2007-2008, attended a public high school in Alaska during the cohort period, and did not transfer to a private school or to a public school outside Alaska, or die before the end of the 2010-2011 school year.

Statutory Information:

- Per Alaska Statute, the Department of Health and Social Services, the Alaska Mental Health Trust Authority and partner organizations work cooperatively to plan, budget and implement an integrated comprehensive mental health program for Alaska. AS 47.30.660(a); AS 47.30.011(b); AS 37.14.003(a); AS 47.30.046(a).
- The high school graduation rate is a key indicator because it illustrates the magnitude and effects of major life impairments suffered by persons who experience clinical conditions defining Trust beneficiary status. AS 47.30.056(b-c). It is also a key indicator because it highlights the need for and potential benefits of timely provision of reasonable levels of necessary services for youth at risk due to mental illness, substance abuse, developmental disabilities, and/or brain injury. AS 47.30.056(i)(1) and (i)(2)(I).

Additional Information:

Alaska Department of Education and Early Development. http://education.alaska.gov/

Alaska Department of Education and Early Development. *Special Education Handbook 2013.* http://education.alaska.gov/TLS/SPED/pdf/FY13%20Handbook/AK%20SPED%20Handbook%20130208.pdf

Alaska Department of Education and Early Development. *Report Card to the Public, State Report Cards.* http://education.alaska.gov/reportcard/

Alaska State Troopers

Alaska Bureau of Investigation
Statewide Drug Enforcement Unit

2014 Annual Drug Report

MARIJUANA

Marijuana is available throughout the state and is often viewed as a gateway drug to other drugs for young adults and teenagers. The 2011 Alaska Youth Risk Behavior Survey conducted by State of Alaska Department of Health and Social Services indicates that 21.2% of high school students used marijuana within the last 30 days. Demand for Alaskan-grown marijuana continues to be high as a result of its exceptional tetrahydrocannabinol (THC) content. Because Alaskan produced marijuana is extremely high quality; Alaska is considered a marijuana exporting state. However, there is also a significant market for "BC Bud" brought into Alaska from British Columbia, Canada.

SDEU teams continue to find extremely sophisticated indoor growing operations. Most commercial marijuana growing operations are found in communities along Alaska's road system. It is not unusual for sites to be located in homes with hidden or underground rooms specifically designed for the cultivation of marijuana. These rooms are often equipped with surveillance cameras and state-of-the-art timers controlling temperature, lighting, water, humidity and air purifiers. Many grows are found during and/or after fires. Also, many lease/rental and abandoned housed are damaged by the remodeling and humidity of a grow operation.

The Drug Enforcement Administration awarded $70,000 in Marijuana Eradication grant funds to the State of Alaska in 2014. These funds were used to cover some of the costs associated with marijuana eradication in the state. Local police departments were notified of the availability of these funds to cover overtime incurred by officers involved in eradication operations. In 2014, one police agency requested use of these funds from AST.

SDEU Marijuana Statistics

Processed Marijuana Seized (Pounds)

2012	2013	2014
407.03	295.79	169.65

Marijuana Related Charges/Arrests

2012	2013	2014
817	669	716

Marijuana Grows Eradicated

2012	2013	2014
65	38	38

Marijuana Plants Seized

2012	2013	2014
5,090	2,351	2,321

SUMMARY

The Statewide Drug Enforcement Unit has a unique ability to interdict and investigate cases across the state. We also recognize that substance abuse is not confined by any one geographical location or economic strata. Drug and alcohol abuse affects all Alaskans, despite social, ethnic, racial, and economic differences.

We also recognize that the ill-gotten gains of drug traffickers and alcohol smugglers promote an increase in lawlessness of all types. This lawlessness is not isolated to the use of controlled substances; it includes, but is not limited to, burglary, theft, domestic violence, assault, and homicide. Through the eradication of such activity, and the arrest of those who would profit off the misery of others, we will make Alaska a better, safer place to live and to raise a family. The Alaska Bureau of Investigation, along with partner agencies across the state, diligently dedicates resources and energy towards this goal.

The Statewide Drug Enforcement Unit is committed to working with interested agencies in the fight against substance abuse. We accomplish this through the utilization of innovative concepts to combat the illegal sale and distribution of alcohol and drugs. We are also committed to increasing awareness and knowledge of drug abuse through educational presentations to the Public Safety Academy and in public forums, such as schools, service organizations, and other community groups.

2014 ANNUAL DRUG REPORT

TABLE OF CONTENTS

INTRODUCTION

The Alaska State Troopers' Alaska Bureau of Investigation, Statewide Drug Enforcement Unit (SDEU) in authoring this publication, has endeavored to represent the drug and illegal alcohol situation in Alaska in a manner that provides the broadest possible picture of the true illicit drug situation.

There are numerous Municipal, Borough, and Federal agencies that conduct drug investigations in Alaska. While some agencies have less formal relationships with the Department of Public Safety, many work closely and collaboratively with the Alaska State Troopers. In order to properly represent the true drug and illegal alcohol situation in Alaska, statistics from as many agencies in Alaska as possible are included in this report. While we made an effort to provide the most accurate seizure data and made a deliberative effort to avoid duplication, there are instances where a specific seizure may have been counted in more than one report. Information provided by all sources should be considered when attempting to measure how drugs and illegal alcohol are impacting the citizens of this state.

We believe including as much information from all agencies involved in drug and illegal alcohol enforcement in Alaska is vital when analyzing the needs of the state in the arena of drug and illegal alcohol enforcement. However, it is important to note that the numbers alone should not be the sole source from which to make a complete assessment of the true drug and illegal alcohol situation in Alaska. To get the most accurate picture of the illicit drug and alcohol situation within Alaska, we have attempted to take into account the anecdotal information gathered from conversations with those investigators on the frontlines of Alaska's efforts to investigate, document, and apprehend those who have chosen to participate in Alaska's illicit drug and alcohol culture.

OUR MISSION

SDEU provides a team-building role in coordinating law enforcement's efforts to reduce the availability of illegal alcohol and controlled substances throughout Alaska. SDEU recognizes that a successful alcohol and drug interdiction program depends upon a unified effort—blending traditional law enforcement techniques with demand reduction programs that address educational, social, and community concerns.

SDEU's Mission is to:

- Interdict and seize alcohol and controlled substances that are illegally distributed throughout Alaska.
- Identify and arrest distributors of controlled substances and illegal alcohol.
- Provide training and investigative support to criminal justice agencies.
- Support and participate in public education programs.

STAFFING AND SUPPORT

SDEU recognizes that because of Alaska's geographical vastness, no single law enforcement agency is capable of addressing the illegal drug and alcohol issues alone. Using a combination of federal and state funding, the Department of Public Safety helps to fund a number of multi-jurisdictional task forces around the state. SDEU encourages cooperative efforts between federal, state, and local law enforcement agencies and has taken a leadership role in fostering and developing many cooperative arrangements through multi-jurisdictional and/or multi-agency efforts. The ABI-SDEU Headquarters office in Anchorage primarily participates in six (6) investigative task forces throughout the state. These teams are broken down by region as follows:

Alaska Interdiction Task Force / Anchorage Enforcement Group (DEA sponsored)
Fairbanks Area-wide Narcotics Team
Mat-Su Narcotics Enforcement Team
South Central Area-wide Narcotics Team
Southeast Alaska Cities Against Drugs Task Force
Western Alaska Alcohol and Narcotics Team

State Wide Drug Enforcement Unit Map

Additional specific information on the individual units can be found at:
http://dps.alaska.gov/AST/ABI/SDEU.aspx

SDEU participates with and receives assistance from several investigative agencies involved in drug enforcement. These agencies include the Drug Enforcement Administration (DEA); Federal Bureau of Investigation (FBI); the US Postal Inspection Service; the Internal Revenue Service (IRS); Bureau of Alcohol, Tobacco, Firearms and Explosives (BATFE); Department of Homeland Security (DHS), to include US Immigration and Customs Enforcement (ICE), and the United States Coast Guard (USCG). SDEU also works closely with other local law enforcement agencies.

NATURE OF ALASKA'S DRUG AND ALCOHOL PROBLEM

Members of Alaska's law enforcement community and others who are part of Alaska's criminal justice system have long known that the greatest contributing factor to violent crimes—including domestic violence and sexual assault—is drug and alcohol abuse. Property crimes such as burglary and theft are also often related to drug and alcohol abuse. It is also widely recognized that many of the accidental deaths that occur in Alaska are related to alcohol use. This is especially true in the western regions of the state and is evident in the statistics entered into the Alaska State Trooper case management systems.

According to the 2012-2013 National Survey on Drug Use and Health, Alaska was ranked as one of the top ten states for rates of illicit drug use in a number of categories. Approximately 13.3 percent of adult Alaska residents reported illicit drug use within the past month (down from 14.45 percent in the 2009-2010 report), while the national average was 9.28 percent (up from 8.82 percent in the 2009-2010 report), ranking Alaska sixth highest in the nation for adult illicit drug use within the past month. Additionally, the National Survey also reported that 12.07 percent of Alaska juveniles used illicit drugs in the past month, compared to the national average of 9.54 percent, ranking Alaska 21st nationally for juvenile use of illicit drugs within the past month.

According to a study completed by the Alaska Justice Statistical Analysis Center that analyzed arrests for drug Offenses in Alaska from 2000-2011, the number of adult arrests for drug offenses increased 34.3 percent during this period (1,486 drug arrests in 2000 to 1,996 drug arrests in 2011). During the same time period, juvenile arrests for drug offenses actually decreased by 19.1 percent (435 drug arrests in 2000, to 352 drug arrests in 2011). Additionally, adult drug offenses accounted for 81.8 percent of the total drug offenses from 2001 through 2011, while juvenile arrests accounted for 18.2 percent.

Drugs and alcohol are also a significant factor in domestic violence and sexual assault in Alaska. According to the 2010 Alaska Victimization Study conducted by the University of Alaska Anchorage, 37.1 percent of adult women in the state of Alaska become victims of sexual violence in their lives—72.2 percent of those are drug or alcohol related sexual assaults. Additionally, alcohol was reported to be a factor in 59 percent of domestic violence cases reported to the Alaska State Troopers from 2001 through 2005, according to a study conducted by UAA. This percentage is significantly higher than national rates, where alcohol was a factor in 42 percent of domestic violence incidents.

While there is no question that many aspects of the drug and alcohol problem are unique to Alaska, SDEU strives to provide a continuing and coordinated effort that not only meets the needs of Alaska, but also supports the National Drug Control Strategy. The strategy underscores the social and economic costs to society and was developed to provide general guidance and a framework for federal, state, and local agencies in developing a counter drug effort. The 2014 National Drug Control Strategy's established objectives are to:

Strengthen efforts to prevent drug use in communities
Seek early intervention opportunities in health care
Integrate treatment for substance use disorders into health care and expand support for recovery

Break the cycle of drug use, crime, delinquency, and incarceration
Disrupt domestic drug trafficking and production
Strengthen international partnerships
Improve information systems for analysis, assessment, and local management

http://www.samhsa.gov/data/sites/default/files/NSDUHStateEst2012-2013-p1/Tables/NSDUHsaePercents2013.pdf

http://justice.uaa.alaska.edu/ajsac/2014/ajsac.14-03.drug_arrests.pdf

http://justice.uaa.alaska.edu/research/2010/1004.avs_2010/1004.07b.statewide_handout.pdf

http://justice.uaa.alaska.edu/forum/25/3fall2008/a_dvassaults.html

DRUGS OF CHOICE

Alcohol, cocaine, heroin, marijuana, methamphetamine, and prescription drugs have been identified as the primary substances of abuse and are the focus of most Alaskan law enforcement efforts.

During 2014, the Alaska State Troopers did not investigate or respond to a single report of a methamphetamine lab, down from five the previous year. Despite progress in eradicating methamphetamine labs throughout the state and enhanced methamphetamine precursor laws in 2006, methamphetamine continues to be readily available throughout Alaska and arrives mostly from sources outside of the state.

The apparent increase of the abuse of heroin and continued abuse of other opiates (including various opioid based prescription medications) is of significant concern, primarily in the urban areas. Alcohol and marijuana continue to be the overwhelming drugs of choice for rural Alaska; however, seizures of methamphetamine, heroin, and prescription drugs have been increasing in smaller rural communities in 2014.

ALCOHOL

Alaska's criminal justice professionals recognize that alcohol is the primary abused substance in Alaska. It often contributes to many violent, suicidal, and accidental deaths, especially in rural areas. Currently, 108 communities have voted in favor of local option statutes prohibiting the sale, importation, and/or possession of all alcohol. Because alcohol remains legal in many areas of Alaska, illegal bootlegging activities continue to be a problem in the local option communities. Alcohol is frequently transported to the villages via the US Postal Service, local air carriers, private aircraft, boat, snow machines, and express mailing services. Bootlegging alcohol of all types has become a very lucrative business in rural Alaska.

The United States Postal Inspector continues to support the cross deputation of investigators in SDEU's Western Alaska Alcohol and Narcotics Team. This program is believed to be the only one of its kind in the United States.

The economics of the illegal sales of alcohol is staggering. For example, a bootlegger can purchase a 750-milliliter bottle of alcohol, legally, for $10 or less in an urban liquor store. The same bottle of alcohol in Bethel, Kotzebue, or Barrow may sell for $50. In more remote communities, alcohol can easily sell for $150 to over $300 per bottle, depending on supply and demand. The initial purchase for the bootlegger involves a minimal cash investment yet may yield a significant cash return. A dollar-for-dollar comparison of alcohol and drugs purchased in Anchorage and then resold in many Alaskan villages breaks down as follows:

Substance	Original Cost	Re-Sell Cost
Cocaine	$1.00	$1.50
Marijuana	$1.00	$4.00
Alcohol	$1.00	$15.00*

*Based on $150.00 per bottle

http://commerce.state.ak.us/dnn/Portals/9/pub/Localopt%209-22-14.pdf

SDEU Alcohol Statistics

Alcohol Seized (Gallons)

2012	2013	2014
473	394	385

Alcohol Related Charges/Arrests

2012	2013	2014
284	214	174

COCAINE

Cocaine continues to be a widely used and lucrative drug for sale in Alaska. Cocaine is readily available in most areas of the state and is seen with great frequency in powder form, and crack cocaine in the major urban areas such as Anchorage and Fairbanks.

Cocaine is brought into Alaska concealed on passengers or in luggage, through ports of entry, such as the Ted Stevens Anchorage International Airport, and it is also shipped via the US Post Office or commercial parcel companies such as FedEx, DHL or UPS.

The cocaine brought into Alaska is typically packaged in kilogram quantities and later broken down by dealers into smaller quantities for retail sale. In powder form, it is normally sold in gram quantities for $100-150 and its primary method of ingestion is by snorting.

Crack dealers use a process involving powder cocaine, water, baking soda and heat to produce crack cocaine, which is then sold in small rocks for $20. The primary method of use for crack is by smoking.

The statistics below show powder and crack cocaine seized by all task forces where SDEU investigators are assigned.

SDEU Cocaine Statistics

Cocaine Seized (Pounds)

2012	2013	2014
56	14.58	31.36

Cocaine Related Charges/ Arrests

2012	2013	2014
74	37	31

HEROIN

Heroin is a highly addictive drug derived from morphine which is obtained from the opium poppy. It is a "downer" or depressant that affects the brain's pleasure systems and interferes with the brain's ability to perceive pain. It is a white to dark brown powder, or a tar-like substance. Heroin can be used in a variety of ways, depending on the user's preference and the purity of the drug. Heroin can be injected into a vein or muscle, smoked in a water pipe or standard pipe, mixed in a marijuana joint or regular cigarette, inhaled as smoke through a straw, or snorted as a powder via the nose.

The short term effects of heroin abuse appear soon after a single dose and disappear after a few hours. After an injection of heroin, the user reports feeling a surge of euphoria accompanied by a warm flushing of the skin, a dry mouth, and heavy extremities.

Heroin use is not isolated to the urban areas of Alaska. Undercover buys and interdictions of heroin have been reported in several smaller communities. Heroin is primarily imported into Alaska via parcels and body carries. Investigations have shown that heroin use crosses socio-economic boundaries.

SDEU Heroin Statistics

Heroin Seized (Pounds)

2012	2013	2014
4.93	55.12	22.42

Heroin Charges/ Arrests

2012	2013	2014
146	151	209

METHAMPHETAMINE

Methamphetamine use continues to be an issue throughout the United States including Alaska. Methamphetamine, also known as meth, speed, crank, crystal, and ice, produces an increase in energy and alertness and a decrease in appetite. The effects, which include an intense rush, have been reported to last up to 36 hours. It can be smoked, snorted, injected, or taken orally.

The collection of hazardous materials associated with the seizure of a methamphetamine lab requires certified clean-up professionals to respond to the location to collect and containerize large items as well as various chemicals found at the site. These containers are then transported to a location for safe, long-term storage or destruction.

Methamphetamine labs have been discovered in recent years in single and multi-family residences in many neighborhoods. In addition to meth labs producing illegal—and often deadly—drugs, the clandestine nature of the manufacturing process and the presence of ignitable, corrosive, reactive, and toxic chemicals at the sites, have resulted in explosions, fires, toxic fumes, and irreparable damage to human health and to the environment. Homes where methamphetamine labs are present are reported to the Alaska Department of Environmental Conservation which maintains an online listing of these addresses, a link to which can be found below. Reoccupation of these properties often requires expensive remediation.

SDEU Meth Statistics

Meth Labs Seized

2012	2013	2014
3	5	0

Meth Seized (Pounds)

2012	2013	2014
35.19	11.53	31.15

Meth Related Charges/ Arrests

2012	2013	2014
182	187	232

http://dec.alaska.gov/spar/perp/methlab/methlab_listing.htm

For more information regarding meth education and awareness, go to: www.montanameth.org, www.mfiles.org, www.lifeormeth.org

PRESCRIPTION DRUGS

Throughout the state, the abuse of prescription drugs continues to be a significant problem. Not only does the abuse of prescription drugs create a health hazard for the users, it creates a financial impact upon the communities. The drugs vary in price and can cost anywhere from one dollar per milligram to two dollars per milligram depending on availability. With the increased demand for the drugs and a shortening of supply, many abusers may not have the money or insurance to pay for their addiction, thus increasing property and violent crimes in these communities. It has been reported that tens of thousands of dollars are being spent to feed this growing abuse and addiction.

The abuse of OxyContin/ Oxycodone and Hydrocodone and other opioid type medications continued to be a significant issue in 2014. These drugs are sought for their pharmaceutical purity and ability to alter the central nervous system.

Prescription drugs have been linked to the following crimes: homicide, assault, prescription fraud, home invasion thefts, property thefts and pharmacy robberies. People who are addicted to prescription drugs facilitate their addiction by doctor shopping, pharmacy shopping, forgery, and purchasing the drugs via the internet. Law enforcement is especially concerned for the welfare of particularly vulnerable populations, such as the elderly, and those with severe long-term illnesses such as cancer.

It is the intent of SDEU to increase pressure on those involved in the non-medical use, abuse, and sales of these addictive drugs, by applying tried and true narcotics investigation techniques, and whenever prudent, partnering with the DEA and FBI to charge these crimes in the federal system.

SDEU Prescription Drug Statistics

Hydrocodone Seized (Dosage Units)

2012	2013	2014
141	1311	796

OxyContin/ Oxycodone Seized (Dosage Units)

2012	2013	2014
609	1419	1183

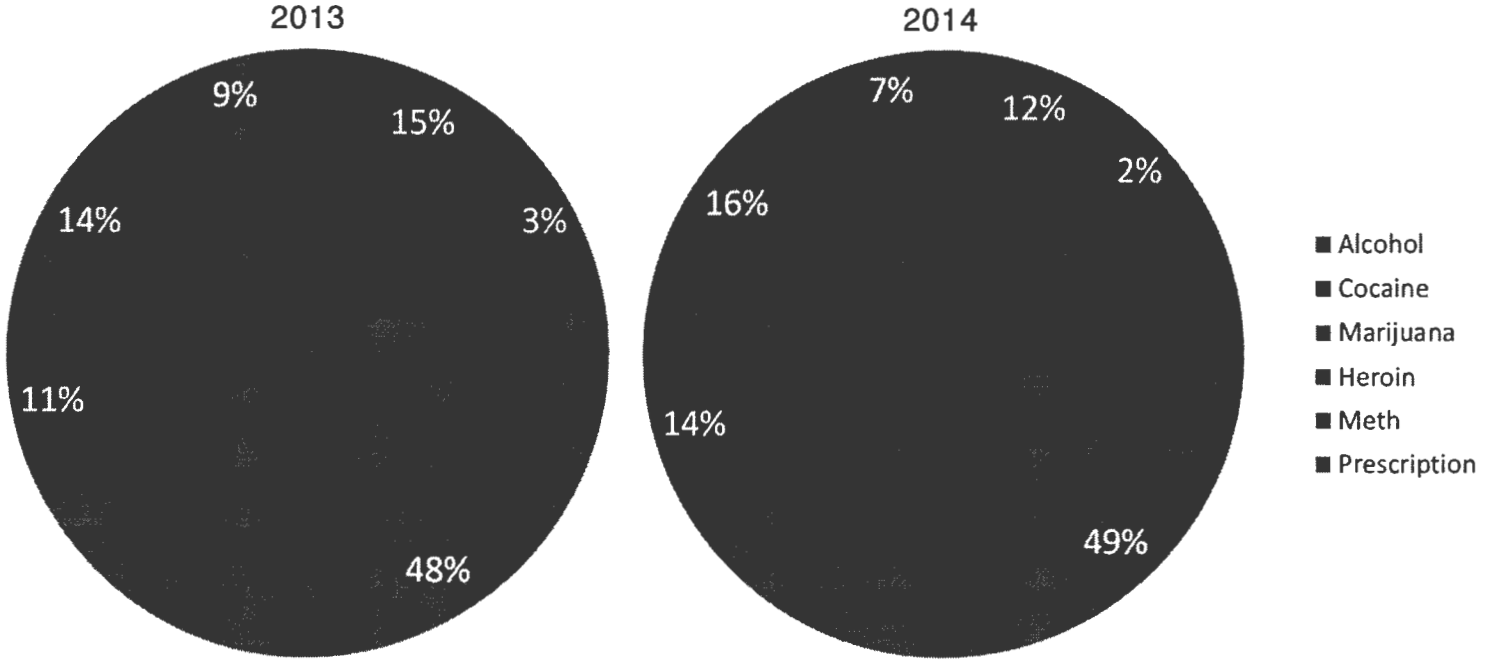
All Other Prescription Drugs Seized (Dosage Units)

2012	2013	2014
2,839	2,485	955

SDEU ARREST SUMMARY 2014

Charges & Arrests
Previous Year Comparison

SDEU Charges and Arrests by Drug Type



SDEU Charges and Arrests per Year*

Substance	2013	2014	Change from Previous Year	
Alcohol	214	174	↓	-22.99%
Cocaine	37	31	↓	-19.35%
Heroin	151	209	↑	27.75%
Marijuana	669	716	↑	6.65%
Meth	187	232	↑	19.40%
Prescription	126	96	↓	-31.25%

*Statistics represent charges and arrests by SDEU only

LOCAL, STATE, AND FEDERAL AGENCY SEIZURES 2014

	Local Agency Seizures 2014										
	Anchorage PD		Kodiak PD		Homer PD		Kenai PD		Kotzebue PD		
Substance	Qty	Street Value	Qty	Street Value	Qty	Street Value	Qty	Street Value	Qty	Street Value	C
Cocaine (g)	6914.21	$1,037,151.50	6	$3,000.00			0.20	$25.00	3.9	$1,500.00	
Crack Cocaine (g)	414.34	$124,302.00	42	$10,500.00							
Hash (g)	31.83	$1,272.00	18	$1,800.00							1
Heroin (g)	6883.57	$3,441,785.00	160	$80,000.00	5.1	$2,550.00	17.8	$7,120.00			12.8
LSD*	1	$50.00									
Marijuana (g)	63927.74	$722,347.39	907	$27,210.00	85.06	$1,701.20	101.65	$2,033.00	25.1	$2,510.00	310
MDMA*	26	$520.00									
Meth (g)	6375.5	$637,549.90	930	$279,000.00	4.22	$422.00	12.49	$2,498.00			78
Psilocybin (g)	154.53	$1,626.00									
Spice (g)	1114.68	$11,146.80					7	**			
Alprazolam/ Xanax*	336	$3,360.00					100	**			52
Buprenorphine*	35	$350.00									15
Diazepam*	14	$140.00					1	**			
Clonazepam/ Valium*	106	$1,060.00					2	**			145
Fentynal*	3	$300.00			9	**					
Hydrocodone/ Vicodin*	448	$2,340.00	10	$1,000.00			38	$760.00			86.5
Methadone*	242	$2,420.00					9	$180.00			17
Morphine*	15	$2,420.00			1	$20.00	6	$120.00			
Oxycodone*	602	$194,560.00	20	$2,400.00			3	$60.00			58
Suboxone*	94	$940.00			3	$30.00					15.3
Zolpidem/ Ambien*	112	$560.00									26
		$6,186,200.59		$404,910.00		$4,723.20		$12,796.00		$4,010.00	

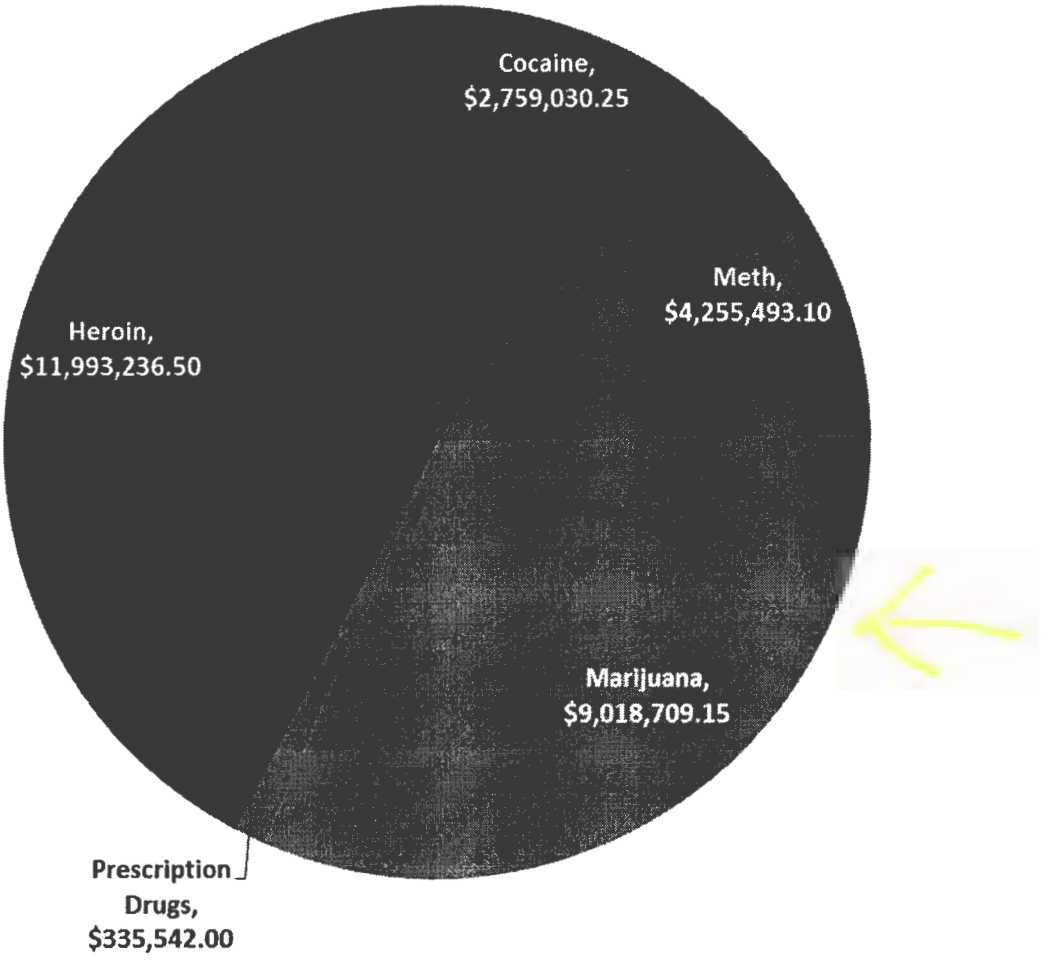
*dosage unit
**data not available

	State and Federal Drug Seizures 2014			
	SDEU		FBI	
Substance	Qty	Street Value	Qty	Street Value
Cocaine (g)	14224.66	$1,424,326.75	1246.20	$155,755.00
Heroin (g)	10169.54	$3,666,565.50	700.50	$140,100.00
Meth (g)	14129.4	$2,221,577.20	2317.00	$463,400.00
Marijuana (g)	76951.95	$2,496,908.76	12.4	$248.00
Marijuana Plants (ea)	2621	$5,301,000.00		
Prescription Drugs (dose)	2934	$94,813.50		

Agency Type	
Local	
State	
Federal	
TOTAL	

"Drugs of Choice": Total Street Value of Seizures
(Local, State, and Federal Seizures)

Substance	Street Value*
Cocaine/Crack Cocaine	$2,759,030.25
Methamphetamine	$4,255,493.10
Heroin	$11,993,236.50
Prescription Drugs	$335,542.00
Marijuana	$9,018,709.15



*Geographic area street values are estimates only. Street value was determined by the Western States Information Network's Drug Price and Purity Guide 2013, or provided by the local agency. The street value of prescription medications can vary widely depending upon dosage strength. When street value could not be accurately determined, it was not included in this report.

NATIONAL PRESCRIPTION DRUG TAKE BACK PROGRAM

This initiative addresses a vital public safety and public health issue. More than seven million Americans currently abuse prescription drugs, according to the 2009 Substance Abuse and Mental Health Administration's National Survey on Drug Use and Health. Each day approximately 2,500 teens use prescription drugs to get high for the first time, according to the Partnership for a Drug Free America. Studies show that a majority of abused prescription drugs are obtained from family and friends, including the home medicine cabinet.

In an effort to address this problem, the US Department of Justice, Drug Enforcement Administration, Office of Diversion Control, in conjunction with state and local law enforcement agencies throughout the United States, conducted the first ever National Prescription Drug Take Back Day on Saturday, September 25, 2010. The purpose of this National Take Back Day was to provide a venue for persons who wanted to dispose of unwanted and unused prescription drugs. This effort was a huge success in removing potentially dangerous prescription drugs—particularly controlled substances—from our nation's medicine cabinets. There were approximately 3,000 state and local law enforcement agencies throughout the nation that participated in the event. All told, the American public turned in more than 121 tons of pills on this first National Take Back Day.

Members from the Alaska State Troopers along with the Drug Enforcement Administration, other Alaskan law enforcement agencies and other professional and community organizations worked together in April and again in September of 2014 to facilitate "Prescription Drug Take Back Days." The September program alone resulted in the collection and proper disposal of 2,300 pounds—over one ton—of prescription medications from around the state.

UNITED STATES COAST GUARD INTERDICTION OPERATION

In 2014, from August 1 through September 30, the United States Coast Guard conducted a concerted narcotics interception effort, with the assistance of other federal and local law enforcement in both the states of Washington and Alaska. The operation focused primarily on maritime based trafficking on passenger vessels. The total amount of seizures by the USCG and supporting entities during this event were estimated to be over 29 ounces of methamphetamines, 11.5 pounds of marijuana, and 100 grams of heroin.

It is the intent of this section to familiarize the reader with some current and anticipated trends within Alaska. To do so, it is important to look at the current Pacific Region picture, as Alaska tends to follow suit in the following years. The National Drug threat Assessment Summary breaks the nation down into eight regions; the Pacific Region is comprised of Alaska, Washington, Oregon, Idaho, Nevada, Hawaii, Guam and Northern and Central California.

PACIFIC REGION TRENDS

Methamphetamine

According to the DEA's 2014 National Drug Threat Assessment, 77% of Pacific Region survey respondents report high availability of methamphetamine in their areas. It is further reported that the supply of Mexican methamphetamine is increasing in the United States. Seizures of methamphetamine coming across the Southwest border have increased 18.5% between calendar year 2012 and 2013.

Powder Cocaine

The National Drug Threat Assessment identifies powder cocaine as a significant issue in the Pacific Region as well. The national trend for 2014 showed that the availability of cocaine in the United States as a whole has slightly increased. Cocaine is smuggled into the United States by Mexican drug trafficking organizations who supply independent dealers and street gangs with the powder cocaine which they often process into crack cocaine prior to distribution.

Marijuana

Marijuana is the most widely available and commonly abused drug throughout the Pacific Region. The Pacific Region leads the country in marijuana cultivation.

In November of 2014, Alaska voters passed Ballot Measure 2, an initiative to legalize recreational use of marijuana, allowing for the regulation and taxation of the drug in a manner similar to alcohol. The initiative will make use and possession of up to one ounce of marijuana legal for persons over the age of 21, beginning February 24, 2015.

ALASKA TRENDS

Methamphetamine

In July of 2006, pseudoephedrine regulations were adopted by the State of Alaska. This armed law enforcement professionals with a valuable tool to combat meth labs in the state. The table below shows the number of reported meth labs seized by SDEU.

Reported Meth Labs Seized in Alaska

2010	2011	2012	2013	2014
11	8	3	5	0

*statistics represent labs seized by SDEU only

Although we have witnessed a decrease in the number of methamphetamine labs since 2006, SDEU has some concern of the recent popularity of a new method in producing methamphetamine known as the "One Pot" or "Shake and Bake" method. All of the labs encountered by the SDEU in 2013 employed the "One Pot" method. No methamphetamine labs were located by Alaska law enforcement in 2014.

Methamphetamine cooks using the one pot method combine ammonium nitrate or sulfate, pseudoephedrine tablets, ether, water, and the reactive metal into one container (typically a plastic soda bottle) from the beginning of the process. The intent is to reduce the amount of time needed for the overall process. The dangers to the cooks and to first responders are due to the mixing of all of the ingredients in one container. The concentration of products builds pressure within the sealed container to levels beyond which the containers were built to withstand. The building pressure along with the violent reaction of the reactive metal with water can create a rupture or bursting of the container, exposing the inner ingredients to the outside air. Beyond the damage that is created by the bursting container, these ruptures are often accompanied by flames resulting from the flammable liquid within the container. As this method begins to gain in popularity within Alaska, it will increase the danger to all citizens of Alaska from explosions, fires, and exposure to dangerous chemicals.

The number of methamphetamine lab seizures in nearly every other region of the country has shown a steady increase over the last three years, due primarily to one pot labs.

As previously mentioned in this publication, methamphetamine abuse remains a significant issue within Alaska. Although the number of labs has remained low, it appears that use and abuse of the drug lingers.

Prescription Medication

More and more, prescription medications are being abused and sold. SDEU continued to see significant seizures of prescription medications in 2014. It is believed that the largest portion of these medications is being obtained through illegal means.

The 2014 National Drug Threat Assessment Summary prepared by the DEA, notes that prescription drug abuse is the nation's fastest growing drug problem. Opioid pain relievers such as hydrocodone and oxycodone are the most widely misused. Controlled prescription drug abuse accounts for more deaths in all of the United States than heroin and cocaine combined.

Heroin

The number of heroin seizures in our urban and rural areas continues to grow. SDEU recognizes that there has been an increase in the availability of heroin throughout the state and it is no longer isolated to the urban areas.

The State Medical Examiner's office continues to see a significant number of deaths where heroin and other opiates are listed as the cause.

Synthetic Cannabinoids

Synthetic cannabis is a term used to describe a variety of a psychoactive herbal and chemical substances which, when consumed mimic the effects of smoking marijuana. Marketed as incense and herbs, these products are sold on the internet and in smoke shops.

Although complete studies have not been conducted, some of the side effects of synthetic cannabis consumption are heart palpitations, extreme agitation, vomiting, delusions, hallucinations, and panic attacks.

In July of 2011, Alaska passed legislation prohibiting the sale and possession of a number of the common chemical compounds found in these synthetic cannabinoids was enacted.

In October of 2014, Alaska legislation prohibited the improper packaging of "spice". This law greatly hindered the ability for synthetic cannabinoids to be sold in Alaska. There still are individuals shipping "spice" into Alaska however, predominately through the USPS.

Bath Salts

Products containing MDPV (3,4 methylenedioxypyrovalerone)—marketed as "legal alternatives to cocaine or Ecstasy (MDMA)" emerged in the U.S. designer drug market during 2009. These synthetic cathinone type products have caused users throughout the country to experience severe adverse effects, and the number of calls to U.S. poison control centers related to them has trended upward. Retailers often sell these products labeled as "bath salts."

In 2012, state legislation banning the substances most commonly found in these substances was enacted.

ADDITIONAL RESOURCES

Office of National Drug Control Policy 2014
http://www.whitehousedrugpolicy.gov/index.html

Drug Enforcement Administration: National Drug Threat Assessment Summary
http://www.dea.gov/resource-center/dir-ndta-unclass.pdf

Center for Substance Abuse Research
http://www.cesar.umd.edu/

U.S. Department of Health and Human Services
http://www.oas.samhsa.gov/nhsda.htm

The Partnership for Drug Free Kids
http://www.drugfree.org/drug-guide

Department of Health and Social Services : Youth Risk Behavior Survey
http://dhss.alaska.gov/dph/Chronic/Pages/yrbs/yrbsresults.aspx

Office of Diversional Control
http://www.deadiversion.usdoj.gov

The 2014 Annual Drug Report is authored by the Alaska State Troopers, Alaska Bureau of Investigation Statewide Drug Enforcement Unit. It can be accessed via the Department of Public Safety internet site therefore there is no publication cost. It is intended to inform Alaskans about the type and frequency of drug related crime reported in Alaska during 2014.

The Alaska State Troopers, Alaska Bureau of Investigation supplied the majority of information presented in this report. Statistical data was provided by the Alaska State Troopers, Alaska Bureau of Investigation, Federal Bureau of Investigation, United States Coast Guard, Anchorage Police Department, Kodiak Police Department, Wasilla Police Department, Kotzebue Police Department, Kenai Police Department, Homer Police Department, and Juneau Police Department.

Legal Memorandum #56 on Legal Issues (/issues/legal) September 13, 2010

Legalizing Marijuana: Why Citizens Should Just Say No

By Charles "Cully" Stimson (/about/staff/s/charles-cully-stimson)

Abstract: *This November, California voters will consider a ballot initiative, the Regulate, Control and Tax Cannabis Act of 2010. Scientific research is clear that marijuana is addictive and that its use significantly impairs bodily and mental functions. Even where decriminalized, marijuana trafficking remains a source of violence, crime, and social disintegration. Furthermore, studies have shown that legalized marijuana will provide nowhere near the economic windfall proclaimed by some proponents. The RCTCA addresses neither the practical problems of implementation nor the fact that federal law prohibits marijuana production, distribution, and possession. There is strong evidence to suggest that legalizing marijuana would serve little purpose other than to worsen the state's drug problems—addiction, violence, disorder, and death. While long on rhetoric, the legalization movement, by contrast, is short on facts.*

The scientific literature is clear that marijuana is addictive and that its use significantly impairs bodily and mental functions. Marijuana use is associated with memory loss, cancer, immune system deficiencies, heart disease, and birth defects, among other conditions. Even where decriminalized, marijuana trafficking remains a source of violence, crime, and social disintegration.[1]

KEY POINTS

1. Legalization of marijuana is b policy because the drug is adc significantly impairs bodily an functions; its use is associatec memory loss, cancer, and birt among other conditions.
2. The RCTCA addresses neither practical problems of implem nor the fact that federal law p marijuana production, distribu possession.
3. Marijuana is not at all like alc Consumption of alcohol carrie health risks and even offers s significant benefits. Consump marijuana impairs the immun and short-term memory, elev risk of heart attack, and cause respiratory and brain damage
4. Policies aimed at legalizing m will result in a myriad of unint but predictable consequences including increased usage by

marijuana from yards where it is being grown."[29] As a result, housing prices near growers are sinking.

Theoretical arguments in favor of marijuana legalization usually overlook the practical matter of how the drug would be regulated and sold. It is the details of implementation, of course, that will determine the effect of legalization on families, schools, and communities. Most basically, how and where would marijuana be sold?

- Would neighborhoods become neon red-light districts like Amsterdam's, accompanied by the same crime and social disorder?
- If so, who decides what neighborhoods will be so afflicted—residents and landowners or far-off government officials?
- Or would marijuana sales be so widespread that users could add it to their grocery lists?
- If so, how would stores sell it, how would they store it, and how would they prevent it from being diverted into the gray market?
- Would stores dealing in marijuana have to fortify their facilities to reduce the risk of theft and assault?[30]

The most likely result is that the drug will not be sold in legitimate stores at all, because while the federal government is currently tolerating medical marijuana dispensaries, it will not tolerate wide-scale sales under general legalizational statutes. So marijuana will continue to be sold on the gray or black market.

The act does not answer these or other practical questions regarding implementation. Rather, it leaves those issues to localities. No doubt, those entities will pass a variety of laws in an attempt to deal with the many problems caused by legalization, unless the local laws are struck down by California courts as inconsistent with the underlying initiative, which would be even worse. At best, that patchwork of laws, differing from one locality to another, will be yet another unintended and predictable problem arising from legalization as envisioned under this act.

Citizens also should not overlook what may be the greatest harms of marijuana legalization: increased addiction to and use of harder drugs. In addition to marijuana's harmful effects on the body and relationship to criminal conduct, it is a gateway drug that can lead users to more dangerous drugs. Prosecutors, judges, police officers, detectives, parole or probation officers, and even defense attorneys know that the vast majority of defendants arrested for violent crimes test positive for illegal drugs, including marijuana. They also know that marijuana is the starter drug of choice for most criminals. Whereas millions of Americans consume moderate amounts of alcohol without ever "moving on" to dangerous drugs, marijuana use and cocaine use are strongly correlated.

While correlation does not necessarily reflect causation, and while the science is admittedly mixed

Furthermore, should California legalize marijuana, other entrepreneurs will inevitably attempt to enter the marketplace and game the system. In doing so, they will compete with Mexican DTOs and other criminal organizations. Inevitably, violence will follow, and unlike now, that violence will not be confined to the border as large-scale growers seek to protect their turf—turf that will necessarily include anywhere they grow, harvest, process, or sell marijuana. While this may sound far-fetched, Californians in Alameda County are already experiencing the reality of cartel-run marijuana farms on sometimes stolen land,[54] protected by "guys [who] are pretty heavily armed and willing to protect their merchandise."[55]

It is not uncommon for drugs with large illegal markets to be controlled by cartels despite attempts to roll them into the normal medical control scheme. For instance, cocaine has a medical purpose and can be prescribed by doctors as *Erythroxylum coca*, yet its true production and distribution are controlled by drug cartels and organized crime.[56] As competition from growers and dispensaries authorized by the RCTCA cuts further into the Mexican DTOs' business, Californians will face a real possibility of bloodshed on their own soil as the cartels' profit-protection measures turn from defensive to offensive.

Thus, marijuana legalization will increase crime, drug use, and social dislocation across the state of California—the exact opposite of what pro-legalization advocates promise.

Conclusion

Pro-marijuana advocates promoting the Regulate, Control and Tax Cannabis Act of 2010 invite Californians to imagine a hypothetical and idyllic "pot market," but America's national approach to drug use, addiction, and crime must be serious, based on sound policy and solid evidence.

In 1982, President Ronald Reagan adopted a national drug strategy that took a comprehensive approach consisting of five components: international cooperation, research, strengthened law enforcement, treatment and rehabilitation, and prevention and education. It was remarkably successful: Illegal drug use by young adults dropped more than 50 percent.

Reagan was right to make drug control a major issue of his presidency. Illegal drugs such as marijuana are responsible for a disproportionate share of violence and social decline in America. Accordingly, federal law, representing the considered judgment of medical science and the nation's two political branches of government, takes the unequivocal position that marijuana is dangerous and has no significant beneficial uses.

California cannot repeal that law or somehow allow its citizens to contravene it. Thus, it has two options. By far the best option is to commit itself seriously to the federal approach and pursue a strategy that attempts to prevent illegal drug use in the first place and reduce the number of drug users. This may require changes in drug policy, and perhaps in sentencing guidelines for marijuana

Nonetheless, this November, California voters will consider a ballot initiative, the Regulate, Control and Tax Cannabis Act of 2010 (RCTCA),[2] that would legalize most marijuana distribution and use under state law. (These activities would remain federal crimes.) This vote is the culmination of an organized campaign by pro-marijuana activists stretching back decades.

The current campaign, like previous efforts, downplays the well-documented harms of marijuana trafficking and use while promising benefits ranging from reduced crime to additional tax revenue. In particular, supporters of the initiative make five bold claims:

1. "Marijuana is safe and non-addictive."
2. "Marijuana prohibition makes no more sense than alcohol prohibition did in the early 1900s."
3. "The government's efforts to combat illegal drugs have been a total failure."
4. "The money spent on government efforts to combat the illegal drug trade can be better spent on substance abuse and treatment for the allegedly few marijuana users who abuse the drug."
5. "Tax revenue collected from marijuana sales would substantially outweigh the social costs of legalization."[3]

As this paper details, all five claims are demonstrably false or, based on the best evidence, highly dubious.

Further, supporters of the initiative simply ignore the mechanics of decriminalization—that is, how it would directly affect law enforcement, crime, and communities. Among the important questions left unanswered are:

- How would the state law fit into a federal regime that prohibits marijuana production, distribution, and possession?
- Would decriminalization, especially if combined with taxation, expand market opportunities for the gangs and cartels that currently dominate drug distribution?
- Would existing zoning laws prohibit marijuana cultivation in residential neighborhoods, and if not, what measures would growers have to undertake to keep children from the plants?
- Would transportation providers be prohibited from firing bus drivers because they smoke marijuana?

No one knows the specifics of how marijuana decriminalization would work in practice or what measures would be necessary to prevent children, teenagers, criminals, and addicts from obtaining the drug.

The federal government shares these concerns. Gil Kerlikowske, Director of the White House Office

5. Despite claims to the contrary, social costs of legalizing marij dwarf the meager taxes raise

ABOUT THE AUTHOR

Charles "Cully" Stimson (/about/ /s/charles-cully-stimson)
Manager, National Security Law Program
Legal Fellow
Center for National Defense

of National Drug Control Policy (ONDCP), recently stated: "Marijuana legalization, for any purpose, is a non-starter in the Obama Administration."[4] The Administration—widely viewed as more liberal than any other in recent memory and, for a time, as embodying the hopes of pro-legalization activists[5]—has weighed the costs and benefits and concluded that marijuana legalization would compromise public health and safety.

California's voters, if they take a fair-minded look at the evidence and the practical problems of legalization, should reach the same conclusion: Marijuana is a dangerous substance that should remain illegal under state law.

The Initiative

The RCTCA's purpose, as defined by advocates of legalization, is to regulate marijuana just as the government regulates alcohol. The law would allow anyone 21 years of age or older to possess, process, share, or transport up to one full ounce of marijuana "for personal consumption." Individuals could possess an unlimited number of living and harvested marijuana plants on the premises where they were grown. Individual landowners or lawful occupants of private property could cultivate marijuana plants "for personal consumption" in an area of not more than 25 square feet per private residence or parcel.

The RCTCA would legalize drug-related paraphernalia and tools and would license establishments for on-site smoking and other consumption of marijuana. Supporters have included some alcohol-like restrictions against, for example, smoking marijuana while operating a vehicle.[6] Finally, the act authorizes the imposition and collection of taxes and fees associated with legalization of marijuana.

Unsafe in Any Amount: How Marijuana Is Not Like Alcohol

Marijuana advocates have had some success peddling the notion that marijuana is a "soft" drug, similar to alcohol, and fundamentally different from "hard" drugs like cocaine or heroin. It is true that marijuana is not the most dangerous of the commonly abused drugs, but that is not to say that it is safe. Indeed, marijuana shares more in common with the "hard" drugs than it does with alcohol.

A common argument for legalization is that smoking marijuana is no more dangerous than drinking alcohol and that prohibiting the use of marijuana is therefore no more justified than the prohibition of alcohol. As Jacob Sullum, author of *Saying Yes: In Defense of Drug Use*, writes:

> Americans understood the problems associated with alcohol abuse, but they also understood the problems associated with Prohibition, which included violence, organized crime, official corruption, the erosion of civil liberties, disrespect for the law, and injuries and deaths caused by tainted black-market booze. They decided that these unintended side effects far outweighed whatever harms Prohibition prevented by discouraging drinking. The same sort of analysis today would show that the harm caused by drug prohibition far outweighs the harm it prevents, even without taking into account the value to each individual of being sovereign over his own body and mind.[7]

At first blush, this argument is appealing, especially to those wary of over-regulation by government. But it overlooks the enormous difference between alcohol and marijuana.

Legalization advocates claim that marijuana and alcohol are mild intoxicants and so should be regulated similarly; but as the experience of nearly every culture, over the thousands of years of human history, demonstrates, alcohol is different. Nearly every culture has its own alcoholic preparations, and nearly all have successfully regulated alcohol consumption through cultural norms. The same cannot be said of marijuana. There are several possible explanations for alcohol's unique status: For most people, it is not addictive; it is rarely consumed to the point of intoxication; low-level consumption is consistent with most manual and intellectual tasks; it has several positive health benefits; and it is formed by the fermentation of many common substances and easily metabolized by the body.

To be sure, there are costs associated with alcohol abuse, such as drunk driving and disease associated with excessive consumption. A few cultures—and this nation for a short while during Prohibition—have concluded that the benefits of alcohol consumption are not worth the costs. But they are the exception; most cultures have concluded that it is acceptable in moderation. No other intoxicant shares that status.

Alcohol differs from marijuana in several crucial respects. First, marijuana is far more likely to cause addiction. Second, it is usually consumed to the point of intoxication. Third, it has no known general healthful properties, though it may have some palliative effects. Fourth, it is toxic and deleterious to health. Thus, while it is true that both alcohol and marijuana are less intoxicating than other mood-altering drugs, that is not to say that marijuana is especially similar to alcohol or that its use is healthy or even safe.

In fact, compared to alcohol, marijuana is not safe. Long-term, moderate consumption of alcohol carries few health risks and even offers some significant benefits. For example, a glass of wine (or other alcoholic drink) with dinner actually improves health.[8] Dozens of peer-reviewed medical

studies suggest that drinking moderate amounts of alcohol reduces the risk of heart disease, strokes, gallstones, diabetes, and death from a heart attack.[9] According to the Mayo Clinic, among many others, moderate use of alcohol (defined as two drinks a day) "seems to offer some health benefits, particularly for the heart."[10] Countless articles in medical journals and other scientific literature confirm the positive health effects of moderate alcohol consumption.

The effects of regular marijuana consumption are quite different. For example, the National Institute on Drug Abuse (a division of the National Institutes of Health) has released studies showing that use of marijuana has wide-ranging negative health effects. Long-term marijuana consumption "impairs the ability of T-cells in the lungs' immune system to fight off some infections."[11] These studies have also found that marijuana consumption impairs short-term memory, making it difficult to learn and retain information or perform complex tasks; slows reaction time and impairs motor coordination; increases heart rate by 20 percent to 100 percent, thus elevating the risk of heart attack; and alters moods, resulting in artificial euphoria, calmness, or (in high doses) anxiety or paranoia.[12] And it gets worse: Marijuana has toxic properties that can result in birth defects, pain, respiratory system damage, brain damage, and stroke.[13]

Further, prolonged use of marijuana may cause cognitive degradation and is "associated with lower test scores and lower educational attainment because during periods of intoxication the drug affects the ability to learn and process information, thus influencing attention, concentration, and short-term memory."[14] Unlike alcohol, marijuana has been shown to have a residual effect on cognitive ability that persists beyond the period of intoxication.[15] According to the National Institute on Drug Abuse, whereas alcohol is broken down relatively quickly in the human body, THC (tetrahydrocannabinol, the main active chemical in marijuana) is stored in organs and fatty tissues, allowing it to remain in a user's body for days or even weeks after consumption.[16] Research has shown that marijuana consumption may also cause "psychotic symptoms."[17]

Marijuana's effects on the body are profound. According to the British Lung Foundation, "smoking three or four marijuana joints is as bad for your lungs as smoking twenty tobacco cigarettes."[18] Researchers in Canada found that marijuana smoke contains significantly higher levels of numerous toxic compounds, like ammonia and hydrogen cyanide, than regular tobacco smoke.[19] In fact, the study determined that ammonia was found in marijuana smoke at levels of up to 20 times the levels found in tobacco.[20] Similarly, hydrogen cyanide was found in marijuana smoke at concentrations three to five times greater than those found in tobacco smoke.[21]

Marijuana, like tobacco, is addictive. One study found that more than 30 percent of adults who used marijuana in the course of a year were dependent on the drug.[22] These individuals often show signs of withdrawal and compulsive behavior.[23] Marijuana dependence is also responsible for a large proportion of calls to drug abuse help lines and treatment centers.

To equate marijuana use with alcohol consumption is, at best, uninformed and, at worst, actively

misleading. Only in the most superficial ways are the two substances alike, and they differ in every way that counts: addictiveness, toxicity, health effects, and risk of intoxication.

Unintended Consequences

Today, marijuana trafficking is linked to a variety of crimes, from assault and murder to money laundering and smuggling. Legalization of marijuana would increase demand for the drug and almost certainly exacerbate drug-related crime, as well as cause a myriad of unintended but predictable consequences.

To begin with, an astonishingly high percentage of criminals are marijuana users. According to a study by the RAND Corporation, approximately 60 percent of arrestees test positive for marijuana use in the United States, England, and Australia. Further, marijuana metabolites are found in arrestees' urine more frequently than those of any other drug.[24]

Although some studies have shown marijuana to inhibit aggressive behavior and violence, the National Research Council concluded that the "long-term use of marijuana may alter the nervous system in ways that do promote violence."[25] No place serves as a better example than Amsterdam.

Marijuana advocates often point to the Netherlands as a well-functioning society with a relaxed attitude toward drugs, but they rarely mention that Amsterdam is one of Europe's most violent cities. In Amsterdam, officials are in the process of closing marijuana dispensaries, or "coffee shops," because of the crime associated with their operation.[26] Furthermore, the Dutch Ministry of Health, Welfare and Sport has expressed "concern about drug and alcohol use among young people and the social consequences, which range from poor school performance and truancy to serious impairment, including brain damage."[27]

Amsterdam's experience is already being duplicated in California under the current medical marijuana statute. In Los Angeles, police report that areas surrounding cannabis clubs have experienced a 200 percent increase in robberies, a 52.2 percent increase in burglaries, a 57.1 percent increase in aggravated assault, and a 130.8 percent increase in burglaries from automobiles. Current law requires a doctor's prescription to procure marijuana; full legalization would likely spark an even more acute increase in crime.

Legalization of marijuana would also inflict a series of negative consequences on neighborhoods and communities. The nuisance caused by the powerful odor of mature marijuana plants is already striking California municipalities. The City Council of Chico, California, has released a report detailing the situation and describing how citizens living near marijuana cultivators are disturbed by the incredible stink emanating from the plants.[28]

Perhaps worse than the smell, crime near growers is increasing, associated with "the theft of

as to whether it is the drug itself or the people the new user associates with who cause the move on to cocaine, heroin, LSD, or other drugs, the RAND Corporation reports that marijuana prices and cocaine use are directly linked, suggesting a substitution effect between the two drugs.[31] Moreover, according to RAND, legalization will cause marijuana prices to fall as much as 80 percent.[32] That can lead to significant consequences because "a 10-percent decrease in the price of marijuana would increase the prevalence of cocaine use by 4.4 to 4.9 percent."[33] As cheap marijuana floods the market both in and outside of California, use of many different types of drugs will increase, as will marijuana use.

It is impossible to predict the precise consequences of legalization, but the experiences of places that have eased restrictions on marijuana are not positive. Already, California is suffering crime, dislocation, and increased drug use under its current regulatory scheme. Further liberalizing the law will only make matters worse.

Flouting Federal Law

Another area of great uncertainty is how a state law legalizing marijuana would fit in with federal law to the contrary. Congress has enacted a comprehensive regulatory scheme for restricting access to illicit drugs and other controlled substances. The Controlled Substances Act of 1970 prohibits the manufacture, distribution, and possession of all substances deemed to be Schedule I drugs—drugs like heroin, PCP, and cocaine. Because marijuana has no "currently accepted medical use in treatment in the United States," it is a Schedule I drug that cannot be bought, sold, possessed, or used without violating federal law.

Under the Supremacy Clause of the Constitution of the United States, the Controlled Substances Act is the supreme law of the land and cannot be superseded by state laws that purport to contradict or abrogate its terms. The RCTCA proposes to "reform California's cannabis laws in a way that will benefit our state" and "[r]egulate cannabis like we do alcohol."[34] But the act does not even purport to address the fundamental constitutional infirmity that it would be in direct conflict with federal law. If enacted and unchallenged by the federal government, it would call into question the government's ability to regulate all controlled substances, including drugs such as Oxycontin, methamphetamine, heroin, and powder and crack cocaine. More likely, however, the feds would challenge the law in court, and the courts would have no choice but to strike it down.

Congress has the power to change the Controlled Substances Act and remove marijuana from Schedule I. Yet after decades of lobbying, it has not, largely because of the paucity of scientific evidence in support of a delisting.

California, in fact, is already in direct violation of federal law. Today, its laws allow the use of marijuana as a treatment for a range of vaguely defined conditions, including chronic pain, nausea, and lack of appetite, depression, anxiety, and glaucoma. "Marijuana doctors" are listed in

the classified advertising sections of newspapers, and many are conveniently located adjacent to "dispensaries." At least one "doctor" writes prescriptions from a tiny hut beside the Venice Beach Boardwalk.

This "medical marijuana" law and similar ones in other states are premised on circumvention of the Food and Drug Administration (FDA) approval process. "FDA's drug approval process requires well-controlled clinical trials that provide the necessary scientific data upon which FDA makes its approval and labeling decisions."[35] Marijuana, even that supposedly used for medicinal purposes, has been rejected by the FDA because, among other reasons, it "has no currently accepted or proven medical use."[36]

The lack of FDA approval means that marijuana may come from unknown sources, may be adulterated with foreign substances, or may not even be marijuana at all. Pot buyers have no way to know what they are getting, and there is no regulatory authority with the ability to go after bogus manufacturers and dealers. Even if one overlooks its inherently harmful properties, marijuana that is commonly sold is likely to be far less safe than that studied in the lab or elsewhere.

Marijuana advocates claim that federal enforcement of drug laws, particularly in jurisdictions that allow the use of medical marijuana, violates states' rights. The Supreme Court, however, has held otherwise. In 2002, California resident Angel Raich produced and consumed marijuana, purportedly for medical purposes. Her actions, while in accordance with California's "medical marijuana" law,[37] clearly violated the Controlled Substances Act, and the local sheriff's department destroyed Raich's plants. Raich claimed that she needed to use marijuana, prescribed by her doctor, for medical purposes. She sued the federal government, asking the court to stop the government from interfering with her right to produce and use marijuana.

In 2006, the Supreme Court held in *Gonzales vs. Raich*[38] that the Commerce Clause confers on Congress the authority to ban the use of marijuana, even when a state approves it for "medical purposes" and it is produced in small quantities for personal consumption. Many legal scholars criticize the Court's extremely broad reading of the Commerce Clause as inconsistent with its original meaning, but the Court's decision nonetheless stands.

If the RCTCA were enacted, it would conflict with the provisions of the Controlled Substances Act and invite extensive litigation that would almost certainly result in its being struck down. Until that happened, state law enforcement officers would be forced into a position of uncertainty regarding their conflicting obligations under federal and state law and cooperation with federal authorities.

Bogus Economics

An innovation of the campaign in support of RCTCA is its touting of the potential benefit of

legalization to the government, in terms of additional revenues from taxing marijuana and savings from backing down in the "war on drugs." The National Organization for the Reform of Marijuana Laws (NORML), for example, claims that legalization "could yield California taxpayers over $1.2 billion per year" in tax benefits.[39] According to a California NORML Report updated in October 2009, an excise tax of $50 per ounce would raise about $770 million to $900 million per year and save over $200 million in law enforcement costs per year.[40] It is worth noting that $900 million equates to 18 million ounces—enough marijuana for Californians to smoke one billion marijuana cigarettes each year.

But these projections are highly speculative and riddled with unfounded assumptions. Dr. Rosalie Liccardo Pacula, an expert with the RAND Corporation who has studied the economics of drug policy for over 15 years, has explained that the California "Board of Equalization's estimate of $1.4 billion [in] potential revenue for the state is based on a series of assumptions that are in some instances subject to tremendous uncertainty and in other cases not validated."[41] She urged the California Committee on Public Safety to conduct an honest and thorough cost-benefit analysis of the potential revenues and costs associated with legalizing marijuana. To date, no such realistic cost-benefit analysis has been done.

In her testimony before the committee, Dr. Pacula stated that prohibition raises the cost of production by at least 400 percent and that legalizing marijuana would cause the price of marijuana to fall considerably—much more than the 50 percent price reduction incorporated into the state's revenue model. Furthermore, she noted that a $50-per-ounce marijuana tax was not realistic, because it would represent a 100 percent tax on the cost of the product.

Under the state scheme, she testified, there would be "tremendous profit motive for the existing black market providers to stay in the market."[42] The only way California could effectively eliminate the black market for marijuana, according to Dr. Pacula, "is to take away the substantial profits in the market and allow the price of marijuana to fall to an amount close to the cost of production. Doing so, however, will mean substantially smaller tax revenue than currently anticipated from this change in policy."

The RCTCA, in fact, allows for so much individual production of marijuana that even the Board of Equalization's $1.4 billion per year revenue estimate seems unlikely. Under the law, any resident could grow marijuana for "personal use" in a plot at home up to 25 square feet in size. One ounce of marijuana is enough for 60 to 120 marijuana cigarettes. One plant produces one to five pounds, or 16 to 80 ounces, of marijuana each year, and 25 square feet of land can sustain about 25 plants. Therefore, an individual will be able to produce 24,000 to 240,000 joints legally each year.

Not only is this more than any individual could possibly consume; it is also enough to encourage individuals to grow and sell pot under the individual allowance. Who would buy marijuana from a state-regulated store and pay the $50 tax per ounce in addition to the sale price when they can

either grow it themselves or buy it at a much lower price from a friend or neighbor. In this way, the RCTCA undermines its supporters' lavish revenue claims.

Other Negative Social Costs

In addition to its direct effects on individual health, even moderate marijuana use imposes significant long-term costs through the ways that it affects individual users. Marijuana use is associated with cognitive difficulties and influences attention, concentration, and short-term memory. This damage affects drug users' ability to work and can put others at risk. Even if critical workers—for example, police officers, airline pilots, and machine operators—used marijuana recreationally but remained sober on the job, the long-term cognitive deficiency that remained from regular drug use would sap productivity and place countless people in danger. Increased use would also send health care costs skyrocketing—costs borne not just by individual users, but also by the entire society.

For that reason, among others, the Obama Administration also rejects supporters' economic arguments. In his speech, Kerlikowske explained that tax revenue from cigarettes is far outweighed by their social costs: "Tobacco also does not carry its economic weight when we tax it; each year we spend more than $200 billion and collect only about $25 billion in taxes." If the heavy taxation of cigarettes is unable even to come close to making up for the health and other costs associated with their use, it seems doubtful at best that marijuana taxes would be sufficient to cover the costs of legalized marijuana—especially considering that, in addition to the other dangers of smoking marijuana, the physical health effects of just three to four joints are equivalent to those of an entire pack of cigarettes.

Other claims also do not measure up. One of the express purposes of the California initiative is to "put dangerous, underground street dealers out of business, so their influence in our communities will fade."[43] But as explained above, many black-market dealers would rationally choose to remain in the black market to avoid taxation and regulation. Vibrant gray markets have developed throughout the world for many products that are legal, regulated, and heavily taxed. Cigarettes in Eastern Europe, alcohol in Scandinavia, luxury automobiles in Russia, and DVDs in the Middle East are all legal goods traded in gray markets that are wracked with violence. In Canada, an attempt at a $3 per pack tax on cigarettes was greeted with the creation of a black market that "accounted for perhaps 30 percent of sales."[44]

Further, even if the RCTCA were to pass, marijuana would remain illegal in the entire United States under federal law while taxed only in California, a situation that would strengthen both California's gray market and the nationwide black market in illegal drugs. Fueled by generous growing allowances and an enormous supply in California, criminal sales operations would flourish as excess California marijuana was sold outside the state and, at the same time, out-of-state growers attempted to access the more permissive market inside the state.

In sum, legalization would put additional strain on an already faltering economy. In 2008, marijuana alone was involved in 375,000 emergency room visits.[45] Drug overdoses already outnumber gunshot deaths in America and are approaching motor vehicle crashes as the nation's leading cause of accidental death.[46] It is true that taxing marijuana sales would generate some tax revenue, but the cost of handling the influx of problems resulting from increased use would far outweigh any gain made by marijuana's taxation. Legalizing marijuana would serve only to compound the problems already associated with drug use.

Social Dislocation and Organized Crime

The final two arguments of those favoring legalization are intertwined. According to advocates of legalization, the government's efforts to combat the illegal drug trade have been an expensive failure. Consequently, they argue, focusing on substance abuse and treatment would be a more effective means of combating drug abuse while reducing the violence and social ills stemming from anti-drug enforcement efforts.

There is no doubt that if marijuana were legalized, more people, including juveniles, would consume it. Consider cigarettes: While their purchase by people under 18 is illegal, 20 percent of high school students admit to having smoked cigarettes in the past 30 days.[47] Marijuana's illegal status "keeps potential drug users from using" marijuana in a way that no legalization scheme can replicate "by virtue of the fear of arrest and the embarrassment of being caught."[48] With increased use comes increased abuse, as the fear of arrest and embarrassment will decrease.

Legalization advocates attempt to create in the minds of the public an image of a typical "responsible" user of marijuana: a person who is reasonable and accountable even when under the influence of marijuana. And for those few that don't fit that image? Society will treat them and restore them to full health. The facts, however, are much uglier.

The RAND Corporation projects a 50 percent increase in marijuana-related traffic fatalities under the RCTCA.[49] That alone should weigh heavily on California voters this fall. In a 2008 national survey, approximately 3 million Americans 12 years old or older started using illicit drugs in the past year— almost 8,000 new users per day. The most commonly used illicit drug is marijuana, especially among the 20 million Americans over 12 who were users in 2008. In California, 62 percent of all marijuana treatment cases are already individuals under 21.[50] Legalization will increase the number of underage users.

Keeping marijuana illegal will undoubtedly keep many young people from using it.[51] Eliminate that criminal sanction (and moral disapprobation), and more youth will use the drug, harming their potential and ratcheting up treatment costs.

Educators know that students using marijuana underperform when compared to their non-using

peers. Teachers, coaches, guidance counselors, and school principals have seen the negative effect of marijuana on their students. The Rev. Dr. D. Stuart Dunnan, Headmaster of Saint James School in St. James, Maryland, says of marijuana use by students:

> The chemical effect of marijuana is to take away ambition. The social effect is to provide an escape from challenges and responsibilities with a like-minded group of teenagers who are doing the same thing. Using marijuana creates losers. At a time when we're concerned about our lack of academic achievement relative to other countries, legalizing marijuana will be disastrous.[52]

Additionally, making marijuana legal in California will fuel drug cartels and violence, particularly because the drug will still be illegal at the national level. The local demand will increase in California, but reputable growers, manufacturers, and retailers will still be unwilling—as they should be—to produce and distribute marijuana. Even without the federal prohibition, most reputable producers would not survive the tort liability from such a dangerous product. Thus, the vacuum will be filled by illegal drug cartels.

According to the Department of Justice's National Drug Threat Assessment for 2010, Mexican drug trafficking organizations (DTOs) "have expanded their cultivation operations in the United States, an ongoing trend for the past decade.... Well-organized criminal groups and DTOs that produce domestic marijuana do so because of the high profitability of and demand for marijuana in the United States."[53]

Legalize marijuana, and the demand for marijuana goes up substantially as the deterrence effect of law enforcement disappears. Yet not many suppliers will operate legally, refusing to subject themselves to the established state regulatory scheme— not to mention taxation—while still risking federal prosecution, conviction, and prison time. So who will fill the void?

Violent, brutal, and ruthless, Mexican DTOs will work to maintain their black-market profits at the expense of American citizens' safety. Every week, there are news articles cataloguing the murders, kidnappings, robberies, and other thuggish brutality employed by Mexican drug gangs along the border. It is nonsensical to argue that these gangs will simply give up producing marijuana when it is legalized; indeed, their profits might soar, depending on the actual tax in California and the economics of the interstate trade. While such profits might not be possible if marijuana was legalized at the national level and these gangs were undercut by mass production, that is unlikely ever to happen. Nor does anyone really believe that the gangs will subject themselves to state and local regulation, including taxation. And since the California ballot does nothing to eliminate the black market for marijuana—quite the opposite, in fact—legalizing marijuana will only incentivize Mexican DTOs to grow more marijuana to feed the demand and exploit the black market.

users charged with simple possession, but simply legalizing a harmful drug—that is, giving up—is not a responsible option.

The other option is to follow the above path in the short term while conducting further research and possibly working with other states in Congress to consider changes in federal law. Although those who oppose the legalization of marijuana have every reason to believe that further, legitimate scientific research will confirm the dangers of its use, no side should try to thwart the sober judgment of the national legislature and sister states.

In short, no state will likely be allowed to legalize marijuana on its own, with such serious, negative cross-state spillover effects. Yet even if California could act as if it were an island, the legalization route would still end very badly for the Golden State. There is strong evidence to suggest that legalizing marijuana would serve little purpose other than to worsen the state's drug problems—addiction, violence, disorder, and death. While long on rhetoric, the legalization movement, by contrast, is short on facts.

—Charles D. "Cully" Stimson is a Senior Legal Fellow in the Center for Legal & Judicial Studies at The Heritage Foundation. Before joining The Heritage Foundation, he served as Deputy Assistant Secretary of Defense; as a local, state, federal, and military prosecutor; and as a defense attorney and law professor. Special thanks to Heritage Intern Anthony Napolitano for his invaluable efforts in the researching, writing, and editing of this report.

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Department of Health and Social Services
Valerie J. Davidson, Commissioner

Division of Public Health
Jay C. Butler, MD, Director, CMO

Editors
Joe McLaughlin, MD, MPH
Louisa Castrodale, DVM, MPH

3601 C Street, Suite 540
Anchorage, Alaska 99503 http://www.epi.alaska.gov/

Local (907) 269-8000
24 Hour Emergency 1-800-478-0084

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Health Impacts of Heroin Use in Alaska

Contributed by Deborah Hull-Jilly, MPH,
Thomas Frasene, BS, Bezaleel Gebru, MS, Alaska Section of Epidemiology,
and Ken Boegli, MPA, Alaska Division of Behavioral Health

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poisoning hospitalizations in Alaska during the time period reviewed.

Treatment Admissions Data
TEDS data reflect episodes or incidences rather than individuals; therefore, the data do not provide the number of unique individuals re-admitted into care.

DHSS Medicaid Billing Data Set
Providers often do not bill specifically for heroin poisoning. The broader opioid poisoning category may capture some underreporting, but it also filters out patients who used a combination of heroin and another specific opioid. Therefore, only records with ICD-9-CM code 965.01 were used. In addition, providers are not required to report non-Medicaid data to DHSS. Lastly, females represent a larger proportion of the Medicaid recipients.

Mortality Data
Death certificates may indicate the cause of death as "opiate" or "multiple drugs" poisoning or overdose, and may not specify heroin as a contributing cause of death. As such, some cases of heroin deaths would have been missed and the findings should be considered an under ascertainment of heroin-associated death.

Risk Factor Data
This study did not involve hypothesis testing to examine risk factors for heroin use, abuse/dependence, or mortality. A recent CDC study on the demographic and substance use trends among heroin users in the United States found that during 2002–2013, persons with higher odds of past-year heroin abuse or dependence included males; persons aged 18–25 years; non-Hispanic whites; people residing in an urban area; <$20,000 household income; having no health insurance or being on Medicaid; and having past-year abuse or dependence on alcohol, marijuana, cocaine, or opioid pain relievers.[23] A similar study to examine Alaska-specific risk factors for heroin abuse would be helpful to better target intervention efforts.

Recommendations

1. Health care providers should endorse SAMHSA's evidence-based "Screening, Brief Intervention, and Referral to Treatment" (SBIRT) model to assist with assessing patients for risky substance use behaviors, engaging in communication, and providing treatment referral.[24] As antepartum maternal opiate use in the U.S. has increased 5-fold from 2000 to 2009, obstetricians and women's health providers, in particular, should be aware of treatment resources for pregnant women.[25] (See: http://www.integration.samhsa.gov/clinical-practice/SBIRT)

2. Health care providers should familiarize themselves with SAMHSA's Opioid Overdose Prevention Toolkit, which provides information on developing evidence-based policies and practices to prevent opioid overdoses.[20]

3. Health care providers should facilitate appropriate access to naloxone.[26]

4. Naloxone kits (either intranasal spray or injectable applications such as Evzio®) and training should be made available to law enforcement, corrections, probation officers, and to persons who are frequently in close contact with heroin users.

5. Health care providers should endorse the use of evidence-based clinical guidelines for opioid pain relievers.[27] While opioids remain a potent tool for the alleviation of pain, some people who become addicted

induces withdrawal symptoms in persons who attempt to inject the medicine to get high instead of taking it orally, as prescribed. The drawback of Suboxone® is that patients often have trouble complying with the treatment. An alternative treatment to improve therapeutic effectiveness is monthly injections of naltrexone-extended release, which can be prescribed by any individual licensed to prescribe medication.[17]

Alaska currently has four methadone clinics and approximately 50 Suboxone® and Subutex® treatment programs and certified prescribers.[18] During the 2014 state fiscal year, a total of 114 persons received state-funded opioid treatment (i.e., methadone detox or maintenance) services for heroin dependence or abuse; 684 additional persons with heroin dependence or abuse received some other type of state-funded substance use disorder service.[19] Evaluation of Alaska's existing heroin treatment resources is warranted to better understand the degree and distribution of coverage gaps statewide.

Overdose Death Prevention

In this report, we describe 72 deaths that were attributed to heroin either as the underlying or a contributory cause of death during the 6-year study period (2008–2013). A helpful resource for overdose prevention among heroin users is SAMHSA's Opioid Overdose Prevention Toolkit, which provides information on developing evidence-based policies and practices to prevent opioid overdoses.[20] One example of a good policy that helps prevent overdose deaths is Alaska's "Good Samaritan Law" (AS 11.71.311), which affords protection from prosecution to a person who summons aid for someone experiencing a drug overdose.

Another effective tool for preventing overdose deaths is naloxone (e.g., Narcan®), an opioid antagonist that can reverse an acute overdose. In April 2014, the U.S. Food and Drug Administration (FDA) approved a naloxone hand-held auto-injector called Evzio®, which rapidly delivers a single dose of naloxone into the muscle or under the skin, buying time until medical assistance can arrive. CDC reports that naloxone has been responsible for reversing over 10,000 opioid overdoses nationwide.[21] The number of reports of naloxone administration by emergency medical service providers into the Alaska Uniform Response Online Reporting Access (AURORA) system increased considerably in 2014 (Figure 6).[22]

Most states have laws that provide protections for prescribing naloxone to persons using opioids (and to their friends, family members, and caregivers), and administering the medication. A bill to provide such immunity from civil penalties for prescribing, providing, and administering an opioid overdose drug was introduced during the first session of the 29th Legislature (SB 23).[x] The bill passed in the Senate, but is still under consideration in the House.

Limitations

Alaska Hospital Discharge Data System

Discharge information was only collected from the 10 hospitals that have voluntarily reported data consistently from 2008–2012. These hospitals are not representative of Alaska as a whole, creating a data gap in some regions of Alaska. Therefore, the data presented here likely represent an underestimate of the true burden of heroin

[x] *Alaska Senate Bill 23 – "An Act relating to opioid overdose drugs and to immunity for prescribing, providing, or administering opioid overdose drugs."*

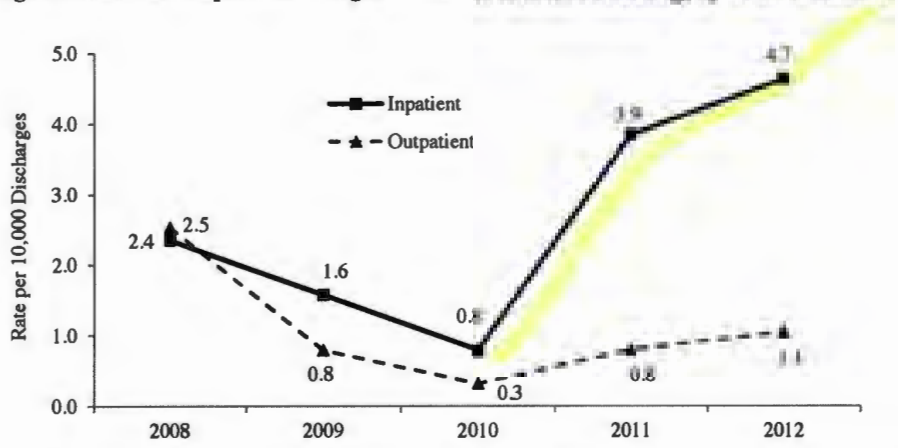
to prescription opioids may begin using heroin in order to obtain a similar sensation for less money per dose.[28] A recent SAMHSA study found that the rate of heroin initiation among people with a history of nonmedical use of opioid pain relievers was approximately 19 times greater than those with no history of nonmedical use.[29] Moreover, in a study recently released by CDC on the demographic and substance use trends among heroin users in the United States, the authors found that in 2011–2013, 45% of people who used heroin were also abusing or addicted to opioid pain relievers.[23]

6. Health care providers should participate in the Alaska Prescription Drug Monitoring Program for monitoring Schedule II–V controlled substances. All dispensers of controlled substances are required to participate in the Alaska Prescription Drug Monitoring Program (AS 17.30.200). This program was created to improve patient safety and deter prescription drug misuse by allowing prescribers to review prescription history information and look for potential interactions, and to encourage cooperation and coordination among state, local, and federal agencies and other states to reduce the abuse and diversion of controlled substances.[30] (See: http://www.alaskapdmp.com)

7. Educators should incorporate skills to prevent initial drug use and abuse into curricula throughout a student's career. Effective drug prevention programs have been shown to reduce drug use and to be cost-effective.[31] These programs work best when they are interactive; tailored to the culture, age, sex, and location of the students; and paired with consistent messages from other community programs.

8. All health care facilities should report hospital discharge and emergency department visit data to DHSS (7 AAC 27.660). Timely and complete reporting helps public health practitioners and researchers examine important topics of interest in public health.

Figure 1. Rate of Hospital Discharges Coded for Heroin Poisoning, by Year — Alaska HDDS, 2008–2012



Source: Hospital Discharge Data System (HDDS) data from 10 Alaska healthcare facilities submitting discharge data annually from 2008–2012

Table 1. Number and Percentage of Patients* With a Primary or Secondary Diagnosis of Heroin Poisoning (ICD code 965.01) — Alaska HDDS, 2008–2012

Diagnosis	Inpatient (n=51)			Outpatient (n=201)			Total (n=252)		
	Males	Females (% by row*)	Total	Males	Females (% by row)	Total	Males	Females (% by row)	Total
Primary	31 (78%)	9 (23%)	40	130 (71%)	53 (29%)	183	161 (72%)	62 (28%)	223
Secondary	6 (55%)	9 (45%)	11	11 [illegible]	7 (39%)	18	17 (59%)	12 (41%)	29
Total	37 (73%)	14 (27%)	51 (100%)	141 (70%)	60 (30%)	201 (100%)	178 (71%)	74 (29%)	252 (100%)

**Percentage totals may not equal 100% due to rounding*

Source: Hospital Discharge Data System (HDDS) data from 10 Alaska healthcare facilities submitting discharge data annually from 2008–2012

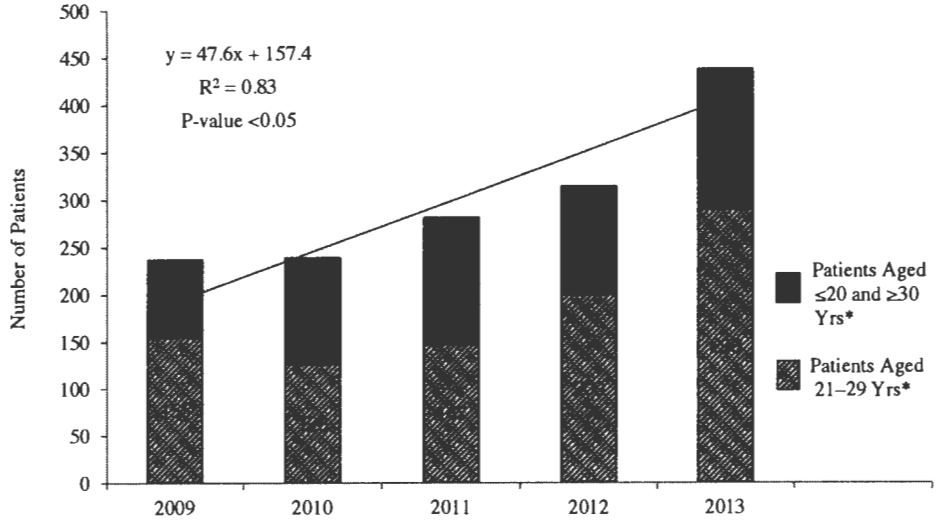
Table 2. Number and Percentage of Patients* With a Diagnosis of Heroin Poisoning (ICD code 965.01) — Alaska HDDS, 2008–2012

Age Group (years)	Inpatient (n=51)			Outpatient (n=201)			Total (n=252)		
	Males	Females (% by row)	Total	Males	Females (% by row)	Total	Males	Females (% by row)	Total
≤19	3 (75%)	1 (25%)	4	5 (38%)	8 (62%)	13	8 (47%)	9 (53%)	17
20–29	24 (77%)	7 (23%)	31	72 (75%)	24 (25%)	96	96 (76%)	31 (24%)	127
30–39	5 (50%)	5 (50%)	10	33 (70%)	14 (30%)	47	38 (67%)	19 (33%)	57
40–49	3 (100%)	0	3	17 (63%)	10 (37%)	27	20 (67%)	10 (33%)	30
50+	2 (67%)	1 (33%)	3	14 (76%)	4 (24%)	18	16 (75%)	5 (25%)	21
Total	37 (73%)	14 (27%)	51 (100%)	141 (70%)	60 (30%)	201 (100%)	178 (71%)	74 (29%)	252 (100%)
Median Age (years)	26	28	26	28	28	28	27	28	27
Range (years)	18–59	18–55	18–59	17–60	16–52	16–60	17–60	16–55	16–60
Race									
White	29 (76%)	9 (24%)	38	130 (70%)	57 (30%)	187	159 (71%)	66 (29%)	225
Black	0	0	0	4 (100%)	0	4	4 (100%)	0	4
American Indian/Alaska Native	8 (67%)	4 (33%)	12	4 (57%)	3 (43%)	7	12 (63%)	7 (37%)	19
Asian	0	0	0	3 (100%)	0	3	3 (100%)	0	3
Other	0	1 (100%)	1	0	0	0	0	1 (100%)	1
All Races	37 (73%)	14 (27%)	51 (100%)	141 (70%)	60 (30%)	201 (100%)	178 (71%)	74 (29%)	252 (100%)

**Percentage totals may not equal 100% due to rounding*

Source: Hospital Discharge Data System (HDDS) data from 10 Alaska healthcare facilities submitting discharge data annually from 2008–2012

Figure 2. Number of Treatment Admissions for Patients Reporting Heroin as Primary Substance of Choice, by Year — Alaska TEDS, 2009–2013



** Beginning in 2013, the SAMHSA Drug and Alcohol Services Information System's 10-year age groups was increased by one year for persons aged ≥21 years; the new 10-year age groups are as follows: 21–30, 31–40, 41–50, 51 and older.*

Figure 3. Number of Medicaid Health Care Services Payment Requests for Heroin Poisoning — Alaska, 2004–2013 (N=158)

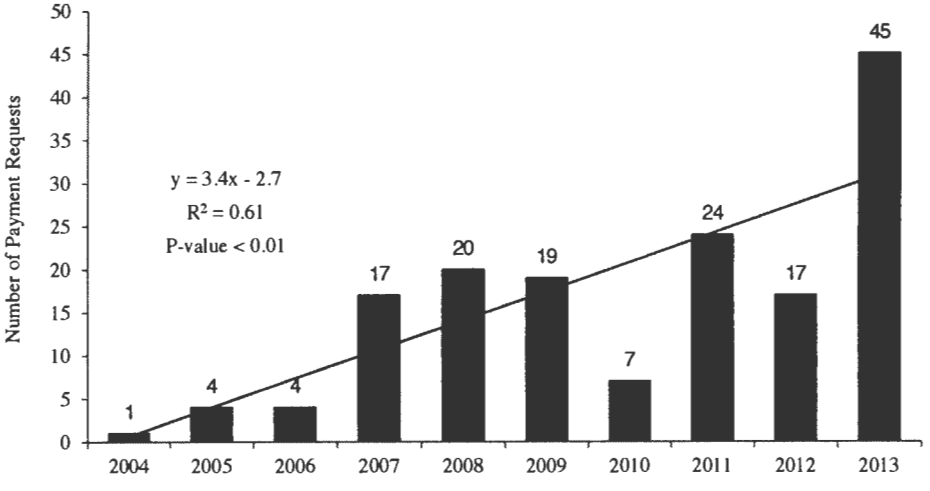


Table 3. Medicaid Patient Demographic Information, ICD-9 Code for Heroin Poisoning — Alaska, 2003–2014 (N=90)

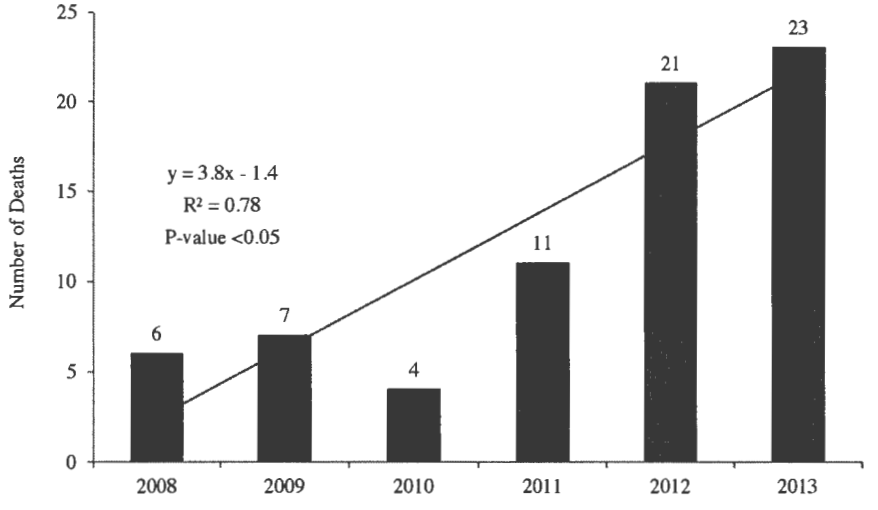
Age	0–19 Years	8	9
	20–29 Years	30	33
	30–39 Years	28	31
	40–49 Years	12	13
	50–59 Years	9	10
	60 Years and Older	3	3
	Total	90	100

Sex	Female	53	59
	Male	37	41
	Total	90	100

Race	Alaska Native / American Indian	23	24
	Asian	1	1
	Black	3	3
	White	65	68
	Other	4	4
	Total Responses*	96	100

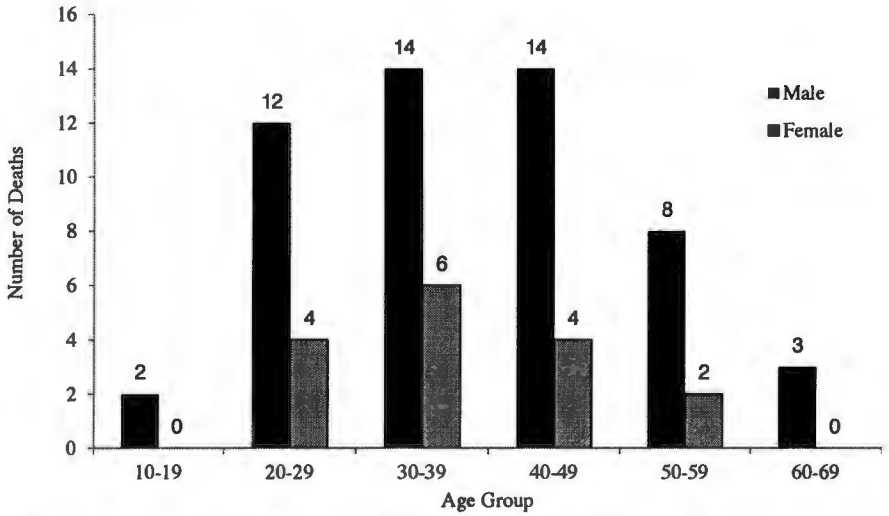
**This total is greater than 90 due to persons reporting 2 or more races.*

Figure 4. **Number of Heroin-Associated Deaths*, by Year — Alaska, 2008–2013 (N=72)**



**Represents deaths where heroin was either the underlying and contributory cause of death.*

Figure 5. Number of Heroin-Associated Deaths*, by 10-Year Age Group and Sex — Alaska, 2008–2013 (N=72)



**Represents deaths where heroin was either the underlying and contributory cause of death*

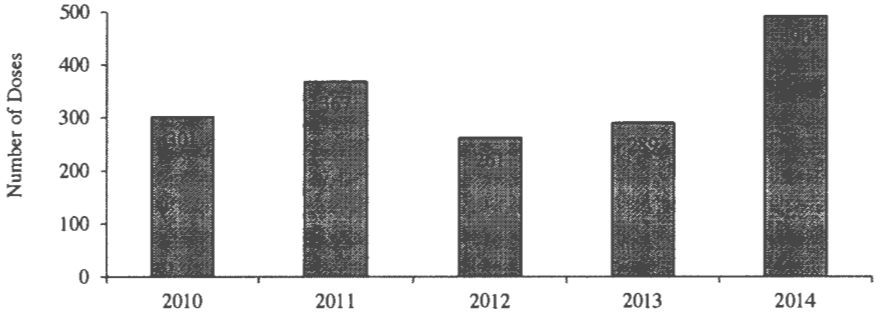
Table 4. Number, Percentage, and Rate of Heroin-Associated Deaths by Region — Alaska, 2008–2013 (N=72)

Region	Number	Percentage	Crude Rate*
Anchorage/ Mat-Su	54	75%	2.3
Gulf Coast	6	8%	1.3
Interior	3	4%	N/A
Northern	1	1%	N/A
Southeast	7	10%	1.6
Southwest	1	1%	N/A
Total	72	99%†	0.9

** Rates per 100,000 persons; N/A = rate not calculated for <5 observations*

† Percentage total does not equal 100% due to rounding

Figure 6. Number of Doses of Naloxone (e.g., Narcan®) Administered by Emergency Medical Service Providers Reporting into AURORA,* by Year — Alaska, 2010–2014



**AURORA=Alaska Uniform Response Online Reporting Access*[22]

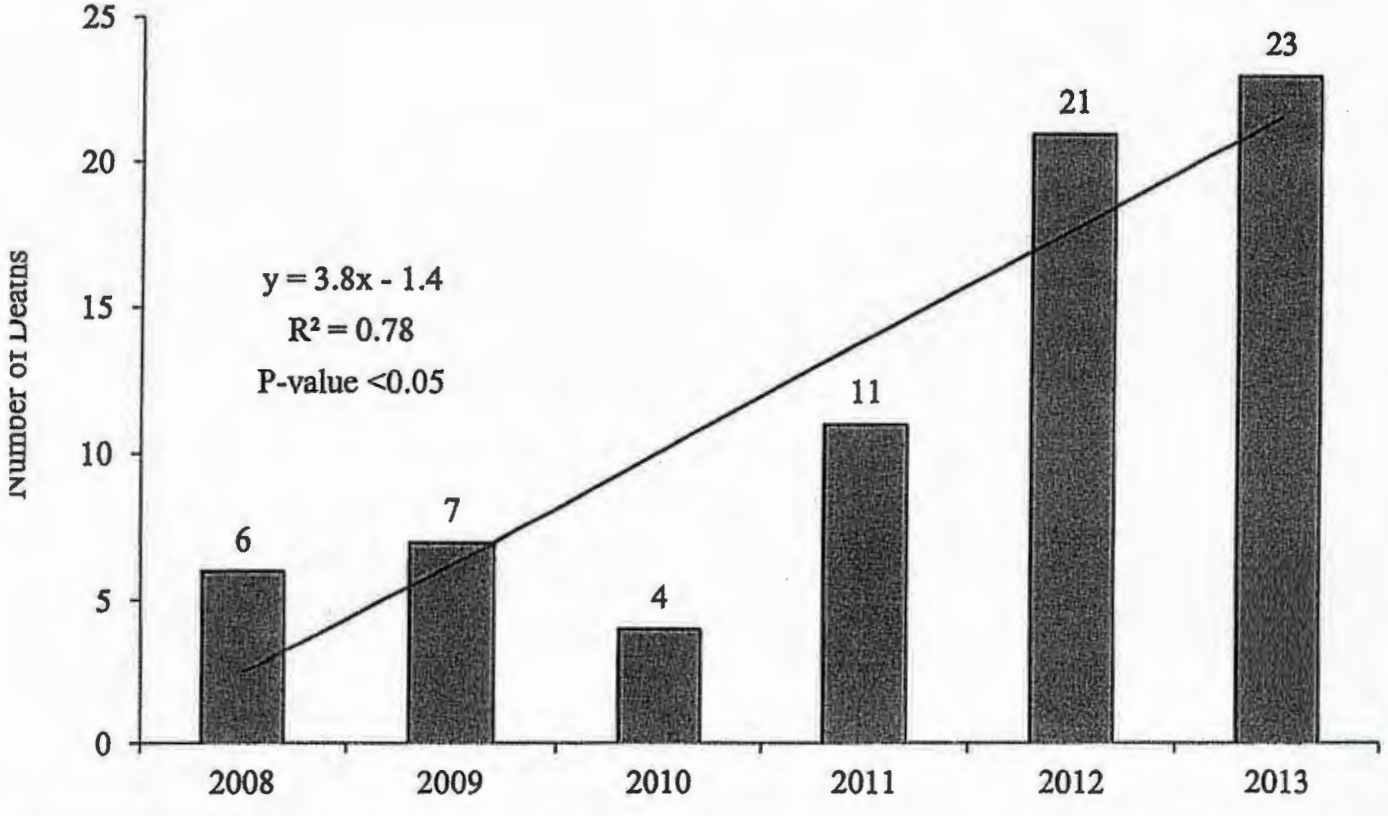
	Category	N	%
Age	0–19 Years	8	9
	20–29 Years	30	33
	30–39 Years	28	31
	40–49 Years	12	13
	50–59 Years	9	10
	60 Years and Older	3	3
	Total	90	100

	Category	N	%
Sex	Female	53	59
	Male	37	41
	Total	90	100

Race	Alaska Native / American Indian	23	24
	Asian	1	1
	Black	3	3
	White	65	68
	Other	4	4
	Total Responses*	96	100

**This total is greater than 90 due to persons reporting 2 or more races.*

'igure 4. Number of Heroin-Associated Deaths*, by Year — Alaska, 2008–2013 (N=72)



Represents deaths where heroin was either the underlying and contributory cause of death.

were transferred to other institutions or health care facilities, and 4 (<2%) expired.

Of the 51 inpatients who were discharged, 30 (59%) were admitted for emergency care, 6 (12%) for urgent care, and 15 (29%) for elective care.[vi] The median length of stay was 2 days (range: 1–17 days).

The average cost per hospitalization was approximately $30,000 (range: $4,700–$168,000). The total inpatient cost of heroin poisoning when indicated as the primary diagnosis exceeded $1.1 million. The total inpatient cost associated with heroin poisoning when indicated as either the primary or secondary diagnosis exceeded $1.5 million.

Of the 201 outpatient discharges identified, 196 (98%) were for emergency care. The average cost per emergency department visit was $2,700. The total emergency department cost associated with heroin poisoning when indicated as either the primary or secondary diagnosis exceeded $530,000.

Substance Use Disorder Treatment Admissions for Heroin Use

During 2009–2013, the number of substance use disorder treatment admissions for all patients reporting heroin as their primary substance of choice increased by 58% (from 476 during 2009–2010 to 751 during 2012–2013), and the number of treatment admissions for patients aged 21–29 reporting heroin as their primary substance of choice increased by 74% (from 281 during 2009–2010 to 490 during 2012–2013; Figure 2).

During 2009–2013, Alaska TEDS indicated that females were admitted for heroin treatment 30% more often than males, persons aged 21–29 years represented the largest proportion of admissions reporting heroin as their primary substance of choice, and 85% of patients who reported using heroin did so intravenously (rather than smoking or snorting).[vii] Among persons aged 21–29 years who were admitted for substance use disorder treatment during 2009–2012, heroin was listed as the primary drug of choice 70% more frequently in Alaska than in the U.S. overall (59% vs. 35%, respectively).

Medicaid Billing for Heroin Poisoning

During 2004–2013, DHSS Medicaid received a total of 158 payment requests for patients with poisoning by heroin; the number of Medicaid health care services payment requests for heroin poisoning increased almost ten-fold (from 9 during 2004–2006 to 84 during 2011–2013; Figure 3). A total of 90 people received care for heroin poisoning; of which, five people received care more than once (range: 2–3 episodes). The demographic characteristics of persons receiving care for heroin poisoning are summarized in Table 3. During 2004–2013, the total amount reimbursed by Medicaid for heroin poisoning was $248,000. The average reimbursement per claim was $3,900; the maximum reimbursement for one case was $112,000.

Heroin-Associated Mortality

During 2008–2013, a total of 72 deaths were attributed to heroin as the underlying or a

[vi] *Emergency care constitutes the need of action without any impediment to reduce the risk of loss of life, urgent care constitutes quick but not immediate action, and elective care constitutes the remaining health services.*

[vii] *Beginning in 2013, the SAMHSA Drug and Alcohol Services Information System adjusted its 10-year age groups by one year* for ages ≥21 years; the *new 10-year age groups are as follows: 21–30, 31–40, 41–50, 51 and older.*

substance of choice at the time of admission" were used to identify treatment occurrences.

The Alaska Department of Health and Social Services (DHSS) maintains billing records for Medicaid clients statewide. Alaska health care providers who request reimbursement from Medicaid must report service dates, diagnoses, and procedures to DHSS. The Alaska Medicaid billing database was analyzed to identify persons who received Medicaid services for heroin-related problems during 2004–2013. Records that did not specify heroin (ICD-9-CM code 965.01 for poisoning by heroin), but specified an opioid other than heroin, were not included.

Fatality reports from the Alaska Violent Death Reporting System (AKVDRS) and the Alaska Bureau of Vital Statistics (AKBVS) mortality database were reviewed to identify all deaths in Alaska associated with heroin from 2008–2013.[v] Decedents were identified by ICD-10 code T40.1 for heroin as a contributing cause of death. Records that did not specify heroin (T40.1), but specified opioid(s) were not included. Additional case information was requested and abstracted from medical examiner and law enforcement records and reports. Variables included in the analysis were demographics, circumstances, environment characteristics, and contributing causes of death. Population estimates from the Alaska Department of Labor and Workforce Development's Research and Analysis Section were used to calculate crude rates. The 2010 U.S. Census data were used for calculating age-adjusted rates.

Statistical Analyses

Occurrences were summarized by counts, percentages, and rates. The rates were presented as occurrences per 10,000 admissions/discharges and deaths per 100,000 population. Rates were not calculated for occurrences with fewer than five observations. The odds ratios (OR), 95% confidence intervals (CI), coefficients of correlation (R) and determination (R^2), and P-values were calculated using SPSS and SAS. P-values <0.05 were considered to be significant.

Results

Hospital Care for Heroin Poisoning

During 2008–2012, 252 discharge records were identified with a primary or secondary diagnosis of poisoning by heroin – 51 were inpatient and 201 were outpatient (e.g., emergency department; Table 1). Demographic characteristics of these patients are summarized in Table 2. Over the 5-year period, the average annual number of discharges with any diagnosis of heroin was 50 (range: 17 in 2010 to 74 in 2012); the average annual rate of heroin poisoning was 2.7 per 10,000 inpatient discharges and 0.9 per 10,000 outpatient discharges. The rate of inpatient hospital discharges (i.e., hospitalizations) coded for heroin poisoning nearly doubled during 2008–2012 (from 2.4 per 10,000 in 2008 to 4.7 per 10,000 in 2012; Figure 1).

Of the 252 inpatients and outpatients who were discharged, 214 (85%) were sent home or deemed capable of self-care, 12 (5%)

[v] *The AKVDRS is a comprehensive reporting system that collects and centralizes information on violent and other manners of deaths from a variety of sources. The AKVDRS captures information such as mental health treatment status, physical and mental health problems and diagnoses, employment and financial status, relationship and emotional crisis, legal issues, and toxicological results of alcohol, antidepressants, and other drugs at the time of death. The data also provide a better understanding of the personal and environment characteristics in order to develop and implement prevention programs.*

Background

The Substance Abuse and Mental Health Services Administration (SAMHSA) estimates that the number of people in the United States (U.S.) who used heroin nearly doubled during 2007–2013 (from 373,000 to 681,000, respectively).[1,2] Largely driven by an increase in use among teens and young adults, the number of persons reporting heroin dependence or abuse in the U.S. during the same period more than doubled (from 213,000 to 517,000).[2,3] According to the Centers for Disease Control and Prevention (CDC), during 2002–2013, heroin overdose death rates nearly quadrupled in the United States.[4]

SAMHSA estimates that the annual average number of people in Alaska who used heroin in the past year quadrupled during 2002–2013, from less than 500 during 2002–2005 to approximately 2,000 during 2010–2013.[5] Across these same two time periods, the estimated annual average number of persons in Alaska with heroin dependence or abuse doubled from less than 500 to approximately 1,000, respectively.[4]

Heroin can contribute directly and indirectly to numerous adverse health outcomes. Indirect consequences of heroin use include facilitation of hepatitis C virus (HCV) and human immunodeficiency virus (HIV) transmission, as well as bacterial infections of the skin, bloodstream, and heart by way of needle sharing among persons who inject heroin. Of the 17,000 new HCV infections reported in the U.S. in 2012, over half were in injection drug users.[6]

The recent resurgence of heroin use impacts public safety.[7] In Alaska, during 2008–2014, the number of heroin arrests and the amount of heroin seized by law enforcement on an annual basis both increased substantially over time.[7,8] The rise in demand for heroin as a drug of choice is likely due in part to the growing availability and affordability of the drug. In fact, many people who become addicted to prescription opioids switch to heroin because it can be cheaper and easier to acquire.[9]

The purpose of this review is to use currently available data sources to describe the health impacts of heroin use in Alaska.

Methods

This review draws from several independent databases that collect information on heroin-related morbidity, mortality, and treatment. The Alaska Hospital Discharge Data System (HDDS), which included hospital discharge data from 10 Alaska health care facilities that consistently reported discharge data during 2008–2012, was queried for heroin poisoning.[i] Occurrences were identified using either the ICD-9-CM code 965.01 for poisoning by heroin or ICD-10 code T40.1 for poisoning by heroin.[ii,iii] Variables analyzed included demographics, primary and secondary diagnoses, discharge status, length of stay, billing payer, and direct medical costs.

The SAMHSA Treatment Episode Data Set (TEDS) was used to identify persons who received treatment for addiction and dependence to heroin during 2009–2013.[iv] Admissions noting "heroin" as the "primary

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[i] *Facilities reporting data are critical access and acute care facilities that provide medical /surgical, psychiatric or medical rehabilitation services either as inpatient or outpatient (emergency department) services.*

[ii] *International Classification of Diseases, 9th Revision, Clinical Modification (ICD-9-CM).*

[iii] *International Statistical Classification of Diseases and Related Health Problems, 10th Revision (ICD-10).*

[iv] *Treatment facilities receiving state/public funding from a state substance abuse agency or other public agency are required to report into the SAMHSA Treatment Episode Data Set.*

Executive Summary

There has been a dramatic rise in the number of people who use, abuse, and die from heroin in the United States in recent years. The purpose of this review is to use currently available data sources to describe the health impacts of heroin use in Alaska. This review draws from several independent databases that collect information on heroin-related morbidity, mortality, and treatment.

From 2008 to 2012 in Alaska, a total of 51 hospital admissions and 201 out-patient evaluations occurred for heroin poisoning, the rate of inpatient hospital discharges (i.e., hospitalizations) coded for heroin poisoning nearly doubled from 2.4 per 10,000 population in 2008 to 4.7 per 10,000 population in 2012, and heroin-related inpatient and outpatient hospital costs exceeded $2 million. Moreover, 72 persons died with heroin use as the primary or a contributing cause of death, and the number of heroin-associated deaths more than tripled during 2008–2013. The number of Medicaid health care services payment requests for heroin poisoning increased almost ten-fold from 2004 to 2013. During the years 2009–2013, heroin-related admissions to publicly-funded substance use treatment centers nearly doubled, and the majority of patients admitted for heroin use treatment were aged 21–29 years; the number of treatment admissions for all patients reporting heroin as their primary substance of choice increased by 58%; and the number of treatment admissions for patients aged 21–29 reporting heroin as their primary substance of choice increased by 74%.

Measures to reduce heroin-related morbidity and mortality include the following: broaden access to naloxone for acute heroin overdose reversal; reduce inappropriate prescribing of opioids by health care providers and enable early identifications of opioid abuse through Alaska's Prescription Drug Monitoring Program; treat heroin addiction with a combined behavioral and pharmacological approach; evaluate Alaska's existing heroin treatment resources to better understand the degree and distribution of coverage gaps statewide, and work to address the identified gaps; endorse SAMHSA's evidence-based "Screening, Brief Intervention, and Referral to Treatment" model to assist health care providers with assessing patients for risky substance use behaviors, engaging in communication, and treating; and assure that students get effective drug prevention education.

of Epidemiology in 2014).[11] Needle exchange programs help prevent needle sharing among injection drug users, and have been shown to be cost-effective for preventing transmission of bloodborne pathogens such as HCV and HIV.[12] Alaska currently has three needle exchange programs—one in Anchorage, one in Fairbanks, and one in Juneau. In light of the ongoing outbreak of HIV and HCV in rural Indiana associated with needle sharing among opioid addicts,[13] coupled with the widespread use of heroin throughout Alaska, many additional Alaska communities would likely benefit from establishing needle exchange programs.

Mortality

During 2008–2013, the number of heroin-associated deaths more than tripled in Alaska, and in 2012, the rate of heroin-associated deaths in Alaska was 42% higher than that for the U.S. overall (2.7 per 100,000 vs. 1.9 per 100,000, respectively).[14] According to a recent SAMHSA report on heroin trends in the U.S., heroin "use" and heroin "dependence or abuse" among persons aged 18 or older have risen steadily since 2007.[3] In addition to rising use patterns, the authors cite other reasons for increases in drug-poisoning deaths, including I) the availability of high purity heroin causing users to accidentally overdose, and 2) some users switching from prescription opioids with a known dosage amount and chemical composition to heroin, which often contains varying purities, dosage amounts, and unknown adulterants used to cut costs and increase potency.[3]

Addiction Treatment

Treating heroin addiction is challenging and requires concerted effort. The most effective treatments include a combined behavioral and pharmacological approach. Behavioral therapeutic approaches for heroin addiction include contingency management, which uses voucher-based rewards for negative drug tests, and cognitive-behavioral therapy, which helps modify the patient's expectations and behaviors related to drug use and to increase skills in coping with life stressors.[15, 16]

The pharmacological treatment for heroin addiction involves medicines that work through opioid receptors. Three general types of heroin addiction medications include 1) *agonists*, which activate opioid receptors (e.g., methadone); 2) *partial agonists*, which also activate opioid receptors but produce a smaller response (e.g., buprenorphine); and 3) *antagonists*, which block the receptor and interfere with the rewarding effects of heroin (e.g., naltrexone).

The practicality of methadone treatment is limited because it is only available through approved outpatient treatment programs, where it is dispensed to patients on a daily basis. In 2002, FDA approved buprenorphine (e.g., Subutex®), the first medication eligible to be prescribed by certified physicians through the Drug Addiction Treatment Act.[ix] This eliminated the need to visit specialized treatment clinics, thereby expanding access to treatment. Suboxone® is an example of a combined formulation of buprenorphine and naltrexone. Suboxone® is also advantageous in that the buprenorphine binds to opioid receptors more avidly than any other opioid, and remains bound for 24 hours, providing users with a sustained, mild opioid effect. This property allows users to avoid withdrawal for a full day, yet retain clear cognition all day. The addition of naltrexone

[ix] *To prescribe medication for opioid dependence (e.g., methadone, buprenorphine naltrexone), physicians must complete special training, work at a treatment facility or have an approved waiver to prescribe.*

URGENT – DRUG ALERT

MARIJUANA VOTE 2/23/16 6:00 P.M.
BOROUGH MEETING, BINKLEY STREET

RECOMMEND A "NO" VOTE TO ESTABLISH LEGAL RETAIL MARIJUANA STORES IN KENAI, SOLDOTNA, STERLING, K BEACH, KASILOF, FUNNY RIVER, HOMER AND SEWARD

Whereas, marijuana is a gateway drug[1] that leads to addictions and death,

Whereas, Alaska is experiencing an epidemic in deaths due to drug overdose,

Whereas, Alaska is experiencing a higher and higher number of suicides,

Whereas, many community leaders and professionals have not been called in to testify before the assembly,

Please communicate:

1. Attend the meeting
2. Contact your representative
3. Call the Borough @ 714-2160
   MESSAGE: please postpone this decision until more research is completed.

1 State of Alaska Epidemiology Bulletin Vol. 17, No.1, Page 9, paragraph 4, July 14, 2014

Family Research Council (http://www.frc.org/)

The Effects of Marijuana

By Donal O'Mathuna ()

Introduction

The first reports of using marijuana medically date from 2737 B.C. when it was mentioned in ancient medical texts in China.[1] Ancient texts from India, Africa, Greece and elsewhere refer to its medicinal use.[2] Modern western medicine first became aware of medical marijuana when an Irish doctor, William O'Shaughnessy, wrote about it after returning from India in 1842.[3] The United States Pharmacopeia (USP) is the official register of legitimate medicinal products for the US; marijuana was added in 1851. It was recommended in those days for pain relief, muscle relaxation, appetite stimulation, and sedation. Concerns about its recreational hallucinogenic use led to it being criminalized in the US in 1937 and removed from the USP in 1942. In 1970 it was listed as a Schedule 1 drug, meaning it has no accepted medical use and many dangers.[4]

In spite of this legal classification, marijuana remained in use within some alternative medicine circles, as well as becoming the most widely used illegal drug in the US.[5] Such recreational use continues to increase among adolescents and young adults. Controversy over its legal status came to greater public attention when California passed Proposition 215 in 1996.[6] Now 20 states and the District of Columbia have voted to legalize marijuana for

necessary cause of psychosis."[40] Apart from genetic factors, smoking marijuana at younger ages and using forms with higher amounts of THC increase this risk. The risk is real; what is unclear is which young people will develop psychosis, or schizophrenia, because they used marijuana.

In addition to specific psychiatric illnesses, about 7-10 percent of regular recreational users of marijuana become dependent, where they need more to get the same effect.[41] Another 10 percent become addicted, with "its relaxing properties transforming into a constant need that interferes with interpersonal and occupational advancement."[42] Chronic users who stop marijuana can trigger withdrawal symptoms, with effects like irritability, anxiety, aggression, restlessness, insomnia, nausea, and cramping.[43] Compared to other abused drugs, these can be mild and short-lived for some, but for others they can be long-lasting. A formal cannabis withdrawal syndrome was added to the 2013 version of the American Psychiatric Association's *Diagnostic and Statistical Manual of Mental Disorders* (DSM-V).[44]

Many of the psychiatric side effects have indirect social consequences. Just one will be highlighted here. Like alcohol, marijuana negatively effects how well people drive or carry out complex motor activities. In spite of this, driving under the influence of marijuana is widespread. In parts of California, 20 percent of nighttime weekend drivers have tested positive for THC.[45] A systematic review examined studies involving actual car crashes where drivers were tested for recent use of marijuana.[46] This found that the risk of drivers being in a serious or fatal crash was almost doubled if they had smoked marijuana recently compared to those who had not.

A 2014 review examined controlled research studies into the impact of smoking marijuana on driving in simulators.[47] Numerous studies demonstrated driver impairment after participants were allowed to smoke as much marijuana as they wished. Driving impairment was highest in the two hours after smoking, but was still seen six hours after smoking. Some, but not all, studies have shown impairment the day after smoking marijuana. When alcohol and drugs that impair psychomotor skills are used with marijuana, the impairment is even worse. The reviewers concluded that patients using medical marijuana (who typically smoke less than recreational users) should be warned against driving after smoking medical marijuana.

Conclusion

All of these data, and a lot more that could have been included, point to marijuana being a drug with serious adverse effects. While many people may not experience any of them, their range and extent point to the legalization of marijuana being a very risky enterprise. Recent discoveries about the endocannabinoid system, and its main component, anandamide, help explain why marijuana impacts the brain so significantly, and the whole body in general. While our brains and bodies make and use cannabinoids, this in no way justifies using marijuana. It is a crude and poor replacement for the way our bodies have been carefully created. "Exogenous plant-derived THC is a sledgehammer compared with anandamide's delicate chisel, the former causing marked disruption of neuronal signaling and circuit dynamics in the finely tuned endogenous system and inducing addiction in the susceptible."[48] Nowhere

National Institutes of Health / U.S. National Library of Medicine

MedlinePlus
Trusted Health Information for You

Home → Health Topics → Marijuana

URL of this page: https://www.nlm.nih.gov/medlineplus/marijuana.html

Marijuana

Also called: Cannabis, Ganja, Grass, Hash, Pot, Weed

Marijuana is a green, brown, or gray mix of dried, crumbled parts from the marijuana plant. It can be rolled up and smoked like a cigarette or cigar or smoked in a pipe. Sometimes people mix it in food or inhale it using a vaporizer.

Marijuana can cause problems with memory, learning, and behavior. Smoking it can cause some of the same coughing and breathing problems as smoking cigarettes. Some people get addicted to marijuana after using it for a while. It is more likely to happen if they use marijuana every day, or started using it when they were teenagers.

Some states have approved "medical marijuana" to ease symptoms of various health problems. The U.S. Food and Drug Administration (FDA) has not approved marijuana as a medicine. THC, the active ingredient in marijuana, is approved to relieve nausea caused by cancer chemotherapy and to boost appetite in severe weight loss caused by HIV/AIDS. Scientists are doing more research on marijuana and its ingredients.

NIH: National Institute on Drug Abuse

Start Here

- Cannabis and Cannabinoids (PDQ) [http://www.cancer.gov/about-cancer/treatment/cam/patient/cannabis-pdq] NIH (National Cancer Institute)
  Available in Spanish [http://www.cancer.gov/espanol/cancer/tratamiento/mca/paciente/cannabis-pdq]
- Marijuana [http://www.drugabuse.gov/drugs-abuse/marijuana]
  NIH (National Institute on Drug Abuse)
- Marijuana [http://www.drugabuse.gov/publications/drugfacts/marijuana]
  NIH (National Institute on Drug Abuse)
  Available in Spanish [http://www.drugabuse.gov/es/publicaciones/drugfacts/la-marihuana]
- Marijuana (Weed, Pot) Facts [https://easyread.drugabuse.gov/content/marijuana-weed-pot-facts] NIH ***Easy-to-Read*** (National Institute on Drug Abuse)
- Marijuana: Facts Parents Need to Know [http://www.drugabuse.gov/publications/marijuana-facts-parents-need-to-know/letter-to-parents] NIH (National Institute on Drug Abuse)

Available in Spanish [http://www.drugabuse.gov/es/publicaciones/la-marihuana-lo-que-los-padres-deben-saber/carta-los-padres]

Latest News

- Rise in Marijuana Use Among U.S. Adults Less Than Reported [https://www.nlm.nih.gov/medlineplus/news/fullstory_157182.html] (02/10/2016, HealthDay)
- Long-Term Pot Use May Make Word Recall Tougher in Middle Age [https://www.nlm.nih.gov/medlineplus/news/fullstory_157008.html] (02/01/2016, HealthDay)
- Teens' IQ Drop Can't Be Blamed Solely on Pot: Study [https://www.nlm.nih.gov/medlineplus/news/fullstory_156752.html] (01/18/2016, HealthDay)
- More News on Marijuana [https://www.nlm.nih.gov/medlineplus/alphanews_m.html#marijuana]

Diagnosis and Tests

- Signs of Marijuana Abuse and Addiction [https://easyread.drugabuse.gov/content/signs-marijuana-use-and-addiction] NIH ***Easy-to-Read*** (National Institute on Drug Abuse)
  Available in Spanish [https://easyread.drugabuse.gov/es/content/marihuana-se%C3%B1ales-de-abuso-y-addici%C3%B3n]

Treatments and Therapies

- Treatment Approaches for Drug Addiction [http://www.drugabuse.gov/publications/drugfacts/treatment-approaches-drug-addiction] NIH (National Institute on Drug Abuse)
  Available in Spanish [http://www.drugabuse.gov/es/publicaciones/drugfacts/enfoques-de-tratamiento-para-la-drogadiccion]
- What Is Substance Abuse Treatment? A Booklet for Families [http://store.samhsa.gov/shin/content//SMA08-4126/SMA08-4126.pdf]
  (Substance Abuse and Mental Health Services Administration) - **PDF**
  Available in Spanish [http://store.samhsa.gov/shin/content//SMA08-4098/SMA08-4098.pdf]

Related Issues

- Does Marijuana Help Treat Glaucoma? [http://www.aao.org/eye-health/tips-prevention/medical-marijuana-glaucoma-treament] (American Academy of Ophthalmology)
  Available in Spanish [http://www.aao.org/salud-ocular/consejos/marihuana-medicinal-y-glaucoma]
- Is Marijuana Medicine? [http://www.drugabuse.gov/publications/drugfacts/marijuana-medicine] NIH (National Institute on Drug Abuse)
  Available in Spanish [http://www.drugabuse.gov/es/publicaciones/drugfacts/es-la-marihuana-un-medicamento]
- Marijuana (Cannabis) and Multiple Sclerosis [http://www.nationalmssociety.org/Treating-MS/Complementary-Alternative-Medicines/Marijuana] (National Multiple Sclerosis Society)
- Marijuana Use & Educational Outcomes [http://www.drugabuse.gov/related-topics/trends-statistics/infographics/marijuana-use-educational-outcomes]
  NIH (National Institute on Drug Abuse)

MEDICAL ENCYCLOPEDIA

Marijuana intoxication [https://www.nlm.nih.gov/medlineplus/ency/article/000952.htm]

Medical marijuana [https://www.nlm.nih.gov/medlineplus/ency/patientinstructions/000899.htm]

Substance use -- marijuana [https://www.nlm.nih.gov/medlineplus/ency/patientinstructions/000796.htm]

Related Health Topics

Drug Abuse [https://www.nlm.nih.gov/medlineplus/drugabuse.html]

National Institutes of Health

The primary NIH organization for research on *Marijuana* is the National Institute on Drug Abuse [http://www.nida.nih.gov/]

MedlinePlus links to health information from the National Institutes of Health and other federal government agencies. MedlinePlus also links to health information from non-government Web sites. See our disclaimer [https://www.nlm.nih.gov/medlineplus/disclaimers.html] about external links and our quality guidelines [https://www.nlm.nih.gov/medlineplus/criteria.html] .

Available in Spanish [http://www.drugabuse.gov/es/related-topics/trends-statistics/infographics/el-uso-de-la-marihuana-y-los-resultados-academicos]

- Smoking Marijuana and the Lungs [http://www.thoracic.org/patients/patient-resources/resources/marijuana.pdf] (American Thoracic Society) - PDF

Specifics

- What Are Synthetic Cannabinoids? [http://www.drugabuse.gov/publications/drugfacts/synthetic-cannabinoids] NIH (National Institute on Drug Abuse)
  Available in Spanish [http://www.drugabuse.gov/es/publicaciones/drugfacts/el-spice-marihuana-sintetica]

Images

- DEA Multimedia Drug Library: Marijuana [http://www.dea.gov/pr/multimedia-library/image-gallery/images_marijuana.shtml] (Drug Enforcement Administration)

Games

- Test Your Knowledge: Marijuana [http://teens.drugabuse.gov/activities/test-your-knowledge/marijuana] NIH (National Institute on Drug Abuse)

Statistics and Research

- Among High School Seniors, Driving After Marijuana Use Surpasses Drunk Driving [http://www.drugabuse.gov/news-events/nida-notes/2014/07/among-high-school-seniors-driving-after-marijuana-use-surpasses-drunk-driving] NIH (National Institute on Drug Abuse)
- Early-Onset, Regular Cannabis Use Is Linked to IQ Decline [http://www.drugabuse.gov/news-events/nida-notes/2013/08/early-onset-regular-cannabis-use-linked-to-iq-decline] NIH (National Institute on Drug Abuse)
- Medical Marijuana in Certain Neurological Disorders [https://www.aan.com/Guidelines/Home/GetGuidelineContent/650] (American Academy of Neurology) - PDF
- Regular Marijuana Users May Have Impaired Brain Reward Centers [http://www.drugabuse.gov/news-events/news-releases/2014/07/regular-marijuana-users-may-have-impaired-brain-reward-centers] NIH (National Institute on Drug Abuse)
- Research Reports: Marijuana [http://www.drugabuse.gov/publications/research-reports/marijuana/letter-director] NIH (National Institute on Drug Abuse)
  Available in Spanish [http://www.drugabuse.gov/es/publicaciones/serie-de-reportes/la-marihuana/nota-de-la-directora]
- Study Parses Comorbidity of Cannabis Use and Social Anxiety [http://www.drugabuse.gov/news-events/nida-notes/2013/10/study-parses-comorbidity-cannabis-use-social-anxiety] NIH (National Institute on Drug Abuse)
- Synthetic Marijuana Lands Thousands of Young People in the ER, Especially Young Males [http://www.drugabuse.gov/related-topics/trends-statistics/infographics/synthetic-marijuana-lands-thousands-young-people-in-er-especially-young-males] NIH (National Institute on Drug Abuse)

Children

- What You Need to Know about Drugs: Marijuana [http://kidshealth.org/kid/grow/drugs_alcohol/know_drugs_marijuana.html] (Nemours Foundation)
  Available in Spanish [http://kidshealth.org/kid/en_espanol/seguridad/know-drugs-marijuana-esp.html]

Teenagers

- Marijuana and Teens [http://www.aacap.org/AACAP/Families_and_Youth/Facts_for_Families/FFF-Guide/Marijuana-and-Teens-106.aspx] (American Academy of Child and Adolescent Psychiatry)
- Marijuana: Facts for Teens [http://www.drugabuse.gov/publications/marijuana-facts-teens/letter-to-teens] NIH (National Institute on Drug Abuse)
  Available in Spanish [http://www.drugabuse.gov/es/publicaciones/hechos-sobre-la-marihuana-para-adolescentes/carta-los-adolescentes]
- Mind Over Matter: The Brain's Response to Marijuana [http://teens.drugabuse.gov/educators/nida-teaching-guides/mind-over-matter-teaching-guide-and-series/marijuana/brains-response] NIH (National Institute on Drug Abuse)
- What Is Spice? [http://teens.drugabuse.gov/drug-facts/spice] NIH (National Institute on Drug Abuse)

Women

- Marijuana and Pregnancy [http://mothertobaby.org/fact-sheets/marijuana-pregnancy/pdf/] (Organization of Teratology Information Specialists) - **PDF**
  Available in Spanish [http://mothertobaby.org/es/fact-sheets/marihuana/pdf/]

Patient Handouts

- Marijuana intoxication [https://www.nlm.nih.gov/medlineplus/ency/article/000952.htm]
  Available in Spanish [https://www.nlm.nih.gov/medlineplus/spanish/ency/article/000952.htm]
- Medical marijuana [https://www.nlm.nih.gov/medlineplus/ency/patientinstructions/000899.htm]
  Available in Spanish [https://www.nlm.nih.gov/medlineplus/spanish/ency/patientinstructions/000899.htm]
- Substance use -- marijuana [https://www.nlm.nih.gov/medlineplus/ency/patientinstructions/000796.htm]
  Available in Spanish [https://www.nlm.nih.gov/medlineplus/spanish/ency/patientinstructions/000796.htm]
- Tips for Teens: The Truth about Marijuana [http://store.samhsa.gov/shin/content//PHD641/PHD641.pdf] (National Clearinghouse for Alcohol and Drug Information) - **PDF**

- Trends in Adolescent Substance Use and Perception of Risk from Substance Use [http://www.samhsa.gov/data/sites/default/files/NSDUH099a/NSDUH099a/sr099-risk-perception-trends.pdf] (Substance Abuse and Mental Health Services Administration) - **PDF**

Clinical Trials

- ClinicalTrials.gov: Marijuana Abuse [https://clinicaltrials.gov/search/open/condition=%22Marijuana+Abuse%22] NIH (National Institutes of Health)
- ClinicalTrials.gov: Cannabinoids [https://clinicaltrials.gov/search/open/term=Cannabinoids+%5BTREATMENT%5D+NOT+(Use+Disorders+OR+Marijuana+Use+OR+Dependence+OR+Abuse+OR+Drug+Use)+%5BCONDITION%5D] NIH (National Institutes of Health)
- ClinicalTrials.gov: Medical Marijuana [https://clinicaltrials.gov/search/open/intervention=%22Medical+Marijuana%22] NIH (National Institutes of Health)

Journal Articles

References and abstracts from MEDLINE/PubMed (National Library of Medicine)

- Article: An economic analysis of different cannabis decriminalization scenarios. [http://www.ncbi.nlm.nih.gov/pubmed/26417786?tool=MedlinePlus]
- Article: Endocannabinoids and Reproductive Events in Health and Disease. [http://www.ncbi.nlm.nih.gov/pubmed/26408167?tool=MedlinePlus]
- Article: Cannabis and Endocannabinoid Signaling in Epilepsy. [http://www.ncbi.nlm.nih.gov/pubmed/26408165?tool=MedlinePlus]
- Marijuana -- see more articles [http://www.ncbi.nlm.nih.gov/pubmed?term=(marijuana+abuse[mh]+OR+marijuana+smoking/adverse+effects[mh])+OR+(substance+related+disorders[mh]+AND+cannabis[mh])+AND+english[la]+AND+humans[mh]+AND+(jsubsetk[text]+OR+review[pt]+OR+guideline[pt]+OR+patient+education+handout[pt]+OR+jsubsetaim[text]+OR+jsubsetn[text])+NOT+(letter[pt]+OR+editorial[pt])+AND+%22last+1+Year%22[edat]&tool=MedlinePlus]
- Medicinal marijuana -- see more articles [http://www.ncbi.nlm.nih.gov/pubmed?term=medical+marijuana[mh]+AND+English[la]+AND+humans[mh]+NOT+letter[pt]+AND+%22last+2+Years%22[edat]&tool=MedlinePlus]

Find an Expert

- Drug Enforcement Administration [http://www.dea.gov/]
- National Institute on Drug Abuse [http://www.drugabuse.gov/] NIH
  Available in Spanish [http://www.drugabuse.gov/es/en-espanol]
- Partnership at Drugfree.org [http://www.drugfree.org/] (Partnership for a Drug-Free America)
- Substance Abuse Treatment Facility Locator [https://findtreatment.samhsa.gov/TreatmentLocator/faces/quickSearch.jspx] (Substance Abuse and Mental Health Services Administration)

From: Blankenship, Johni
Sent: Thursday, February 18, 2016 9:46 AM
To: Navarre, Mike; Ostrander, Paul; Gilman, Blaine; Bagley, Dale; Dunne, Willy; Holmdahl, Brandii; Johnson, Brent; Cooper, Kelly; Knopp, Gary; Welles, Stan; Ogle, Wayne
Cc: Turner, Michele
Subject: Marijuana Articles provided by Dolly Phelps

Good morning,

Please follow the links below to the articles submitted by Dollynda Phelps for your reference. She will be at the February 23rd meeting to address this issue.

Thanks, Johni

http://m.huffpost.com/us/entry/marijauna-depression_n_6622126.html

https://www.drugabuse.gov/drugs-abuse/marijuana/nida-research-therapeutic-benefits-cannabis-cannabinoids

New Study Finds Marijuana To Be Effective Against Depression

02/06/2015 08:34 am ET | **Updated** Feb 06, 2015

20 K

- Carolyn Gregoire Senior Writer, The Huffington Post

BRUCE BENNETT VIA GETTY IMAGES

Research has suggested that cannabis may be a promising treatment option for a number of different physical and mental health conditions, from post-traumatic stress disorder to chronic pain. A study released this week suggests that depression can be added to that list.

Neuroscientists from the University of Buffalo's Research Institute on Addictions found that endocannabinoids -- chemical compounds in the brain that activate the same receptors as THC, an active compound in marijuana -- may be helpful in treating depression that results from chronic stress.

In studies on rats, the researchers found that chronic stress reduced the production of endocannabinoids, which affect our cognition, emotion and behavior, and have been linked to reduced feelings of pain and anxiety, increases in appetite and overall feelings of well-being. The body naturally produces these compounds, which are similar to the chemicals in cannabis. Reduction of endocannabinoid production may be one reason that chronic stress is a major risk factor in the development of depression.

Then, the research team administered marijuana cannabinoids to the rats, finding it to be an effective way to restore endocannabinoid levels in their brains -- possibly, thereby, alleviating some symptoms of depression.

"Using compounds derived from cannabis -- marijuana -- to restore normal endocannabinoid function could potentially help stabilize moods and ease depression," lead researcher Dr. Samir Haj-Dahmane said in a university press release.

Recent research around marijuana's effect on symptoms of post-traumatic stress disorder further bolsters the Buffalo neuroscientists' findings, since both disorders involve the way the brain responds to stress. A study published last year in the journal Neuropsychopharmacology, for instance, found synthetic cannabinoids triggered changes in brain centers associated with traumatic memories in rats, preventing some of the behavioral and physiological symptoms of PTSD. Another study published last year found that patients who smoked cannabis experienced a 75 percent reduction in PTSD symptoms.

However, it's important to note that the relationship between marijuana and depression is complex. Some research has suggested that regular and heavy marijuana smokers are at a higher risk for depression, although a causal link between cannabis use and depression has not been established. More studies are needed in order to determine whether, and how, marijuana might be used in a clinical context for patients with depression.

Read the full study here.

Also on HuffPost:

- **Summer Weather**

Thinkstock

Seasonal Affective Disorder (SAD) is most commonly associated with winter blues, and it afflicts about 5 percent of Americans. But for less than 1 percent of those people, this form of depression strikes in the summer. Warm weather depression arises when the body experiences a "delay adjusting to new seasons," says Alfred Lewy, MD, professor of psychiatry at Oregon Health and Science University, in Portland. Instead of waking and enjoying dawn, the body has a hard time adjusting, he says, which could be due to imbalances in brain chemistry and the hormone melatonin. **More from Health.com:** 10 Tips for Dating With Depression The Most Depressing States in the U.S. Depressing Jobs: Career Fields With Hight Rates of Depression

- **Smoking**

Thinkstock

Smoking has long been linked with depression, though it's a chicken-or-egg scenario: People who are depression-prone may be more likely to take up the habit. However, nicotine is known to affect neurotransmitter activity in the brain, resulting in higher levels of dopamine and serotonin (which is also the mechanism of action for antidepressant drugs). This may explain the addictive nature of the drug, and the mood swings that come with withdrawal, as well as why depression is associated with smoking cessation. Avoiding cigarettes -- and staying smoke free -- could help balance your brain chemicals.

- **Thyroid Disease**

Thinkstock

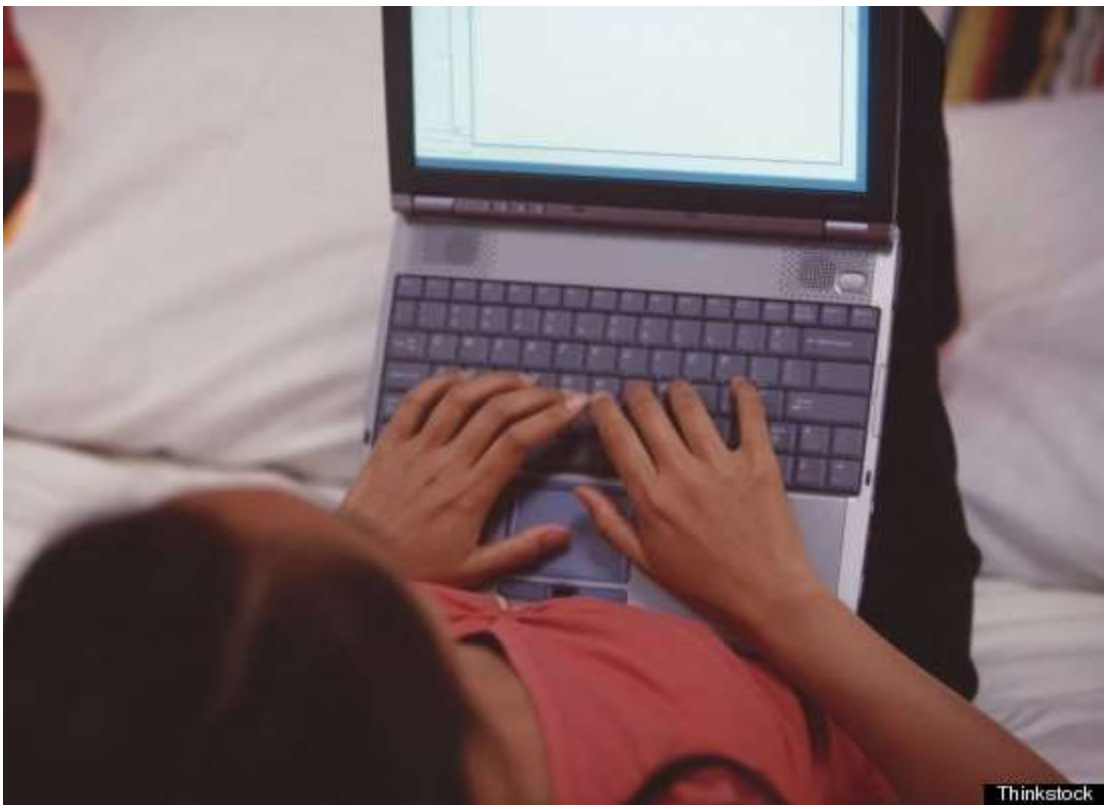
When the thyroid, a butterfly-shaped gland in the neck, doesn't produce enough thyroid hormone, it's known as hypothyroidism, and depression is one of its symptoms. This hormone is multifunctional, but one of its main tasks is to act as a neurotransmitter and regulate serotonin levels. If you experience new depression symptoms -- particularly along with cold sensitivity, constipation and fatigue -- a thyroid test couldn't hurt. Hypothyroidism is treatable with medication.

- **Poor Sleep Habits**

Thinkstock

It's no surprise that sleep deprivation can lead to irritability, but it could also increase the risk of depression. A 2007 study found that when healthy participants were deprived of sleep, they had greater brain activity after viewing upsetting images than their well-rested counterparts, which is similar to the reaction that depressed patients have, noted one of the study authors. "If you don't sleep, you don't have time to replenish [brain cells], the brain stops functioning well, and one of the many factors that could lead to is depression," says Matthew Edlund, M.D., director of the Center for Circadian Medicine, in Sarasota, Fla., and author of "The Power of Rest."

- **Facebook Overload**



Thinkstock

Spending too much time in chat rooms and on social-networking sites? A number of studies now suggest that this can be associated with depression, particularly in teens and preteens. Internet addicts may struggle with real-life human interaction and a lack of companionship, and they may have an unrealistic view of the world. Some experts even call it "Facebook depression." In a 2010 study, researchers found that about 1.2 percent of people ages 16 to 51 spent an inordinate amount of time online, and that they had a higher rate of moderate to severe depression. However, the researchers noted that it is not clear if Internet overuse leads to depression or if depressed people are more likely to use the Internet.

- **End Of A TV Show Or Movie**

Thinkstock

When something important comes to an end, like a TV show, movie, or a big home renovation, it can trigger depression in some people. In 2009, some "Avatar" fans reported feeling depressed and even suicidal because the movie's fictional world wasn't real. There was a similar reaction to the final installments of the Harry Potter movies. "People experience distress when they're watching primarily for companionship," said Emily Moyer-Gusé, Ph.D., assistant professor of communication at Ohio State University, in Columbus. With "Avatar," Moyer-Gusé suspects people were "swept up in a narrative forgetting about real life and [their] own problems."

- **Where You Live**

Thinkstock

You can endlessly debate whether city or country life is better. But research has found that people living in urban settings do have a 39 percent higher risk of mood disorders than those in rural regions. A 2011 study in the journal Nature offers an explanation for this trend: City dwellers have more activity in the part of the brain that regulates stress. And higher levels of stress could lead to psychotic disorders. Depression rates also vary by country and state. Some states have higher rates of depression and affluent nations having higher rates than low-income nations. Even altitude may play a role, with suicide risk going up with altitude.

- **Too Many Choices**

Thinkstock

The sheer number of options available -- whether it's face cream, breakfast cereal or appliances -- can be overwhelming. That's not a problem for shoppers who pick the first thing that meets their needs, according to some psychologists. However, some people respond to choice overload by maximizing, or exhaustively reviewing their options in the search for the very best item. Research suggests that this coping style is linked to perfectionism and depression.

- **Lack Of Fish In The Diet**

Thinkstock

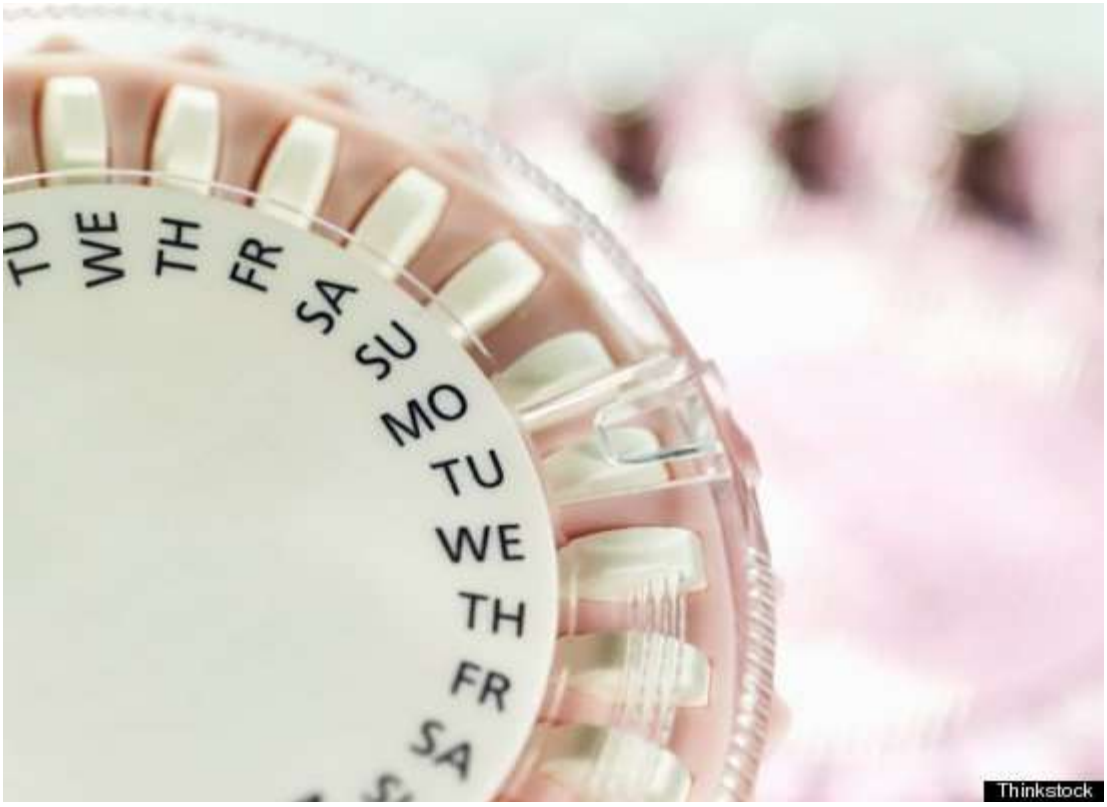
Low intake of omega-3 fatty acids, found in salmon and vegetable oils, may be associated with a greater risk of depression. A 2004 Finnish study found an association between eating less fish and depression in women, but not in men. These fatty acids regulate neurotransmitters like serotonin, which could explain the link. Fish oil supplements may work too; at least one study found they helped depression in people with bipolar disorder.

- **Poor Sibling Relationships**

Thinkstock

Although unhappy relationships with anyone can cause depression, a 2007 study in the American Journal of Psychiatry found that men who didn't get along with their siblings before age 20 were more likely to be depressed later in life than those who did. Although it's not clear what's so significant about sibling relationships (the same wasn't true for relationships with parents), researchers suggest that they could help children develop the ability to relate with peers and socialize. Regardless of the reason, too much squabbling is associated with a greater risk of developing depression before age 50.

- **Birth Control Pills**



Thinkstock

Like any medication, the pill can have side effects. Oral contraceptives contain a synthetic version of progesterone, which studies suggest can lead to depression in some women. "The reason is still unknown," says Hilda Hutcherson, M.D., clinical professor of obstetrics and gynecology at Columbia University, in New York. "It doesn't happen to everyone, but if women have a history of depression or are prone to depression, they have an increased chance of experiencing depression symptoms while taking birth control pills," Dr. Hutcherson says. "Some women just can't take the pill; that's when we start looking into alternative contraception, like a diaphragm, which doesn't contain hormones."

- **Rx Medications**

Thinkstock

Depression is a side effect of many medications. For example, Accutane and its generic version (isotretinoin) are prescribed to clear up severe acne, but depression and suicidal thoughts are a potential risk for some people. Depression is a possible side effect for anxiety and insomnia drugs, including Valium and Xanax; Lopressor, prescribed to treat high blood pressure; cholesterol-lowering drugs including Lipitor; and Premarin for menopausal symptoms. Read the potential side effects when you take a new medication, and always check with your doctor to see if you might be at risk. **More from Health.com:** 10 Tips for Dating With Depression The Most Depressing States in the U.S. Depressing Jobs: Career Fields With Hight Rates of Depression

NIDA Research on the Therapeutic Benefits of Cannabis and Cannabinoids

366

Revised May 2015

Developing the Therapeutic Potential of the Endocannabinoid System for Pain Treatment (PA-15-188) - The purpose of this NIH Pain Consortium-endorsed funding opportunity announcement is to support projects examining the therapeutic potential of cannabinoids and endocannabinoid system across a variety of pain conditions

There is considerable interest in the possible therapeutic uses of marijuana (see our fact sheet, "Is Marijuana Medicine?"). As of January 31, 2014, there were 28 active grants related to this topic, funded by NIDA, in 6 different disease categories (see table, below). Therapeutic research is defined here as projects that include (as at least one of their specific aims) investigation of the potential medical benefit of the marijuana plant (*Cannabis sativa*) or its constituent *cannabinoid* chemicals in human or animal models of disease.

Most of these research projects are examining the medical benefits of individual cannabinoid chemicals derived from or related to those in the marijuana plant, not the plant itself, although a few use unprocessed plant material. Individual cannabinoid chemicals may be isolated and purified from the marijuana plant or synthesized in the laboratory, or they may be naturally occurring (endogenous) cannabinoids found in the body and modified using other, non-cannabinoid chemicals.

Specifically, cannabinoids are classified here as:

- **Plant** – plant leaves, flowers, stems, and seeds collected from the *Cannabis sativa* plant and ingested in some form (cigarettes, vapor); also known as phytocannabinoids.
- **Endogenous** – cannabinoids made by the body: *N*-arachidonoylethanolamine or anandamide (AE) or 2-arachidonoylglycerol (2-AG). AE and 2-AG activity is manipulated by inhibiting their corresponding hydrolases FAAH or MAGL, preventing their degradation.
- **Purified** – naturally occurring cannabinoids purified from plant sources: Cannabidiol (CBD), D9-tetrahydrocannabinol (THC), and Sativex (mixture of THC and CBD).
- **Synthetic** –cannabinoids synthesized in a laboratory: CB1 agonists (CPP-55, ACPA), CB2 agonists (JWH-133, NMP7, AM1241), CB1/CB2 nonselective agonist (CP55,940), Ajulemic Acid (AJA), Nabilone, Dronabinol, and several other proprietary chemicals in development as potential cannabinoid agonists and antagonists for therapeutic use.

How the Portfolio Analysis Was Conducted:

- An internal NIH database (QVR) was searched on January 31, 2014 using the following: TEXT word string "cannabinoid OR cannabis OR marijuana"; active grants
- 317 grants were manually screened to identify studies in which at least one specific aim included a therapeutic focus.
- 28 projects were identified (25 projects + 3 supplements) and are listed in the table below.

In the table, projects are divided into six disease categories: *autoimmune diseases*, *inflammation*, *pain*, *psychiatric disorders*, *seizures*, and *substance use disorders* (*SUD*s). Clicking on individual project titles leads to their descriptions in NIH RePorter. Also listed are the cannabinoid substances being examined and, except in cases when the whole plant was used, whether the studied chemicals are purified from the plant, synthetic, or endogenous; and whether the project uses human or animal subjects.

Autoimmune disease

Project Title	Cannabinoid	Study Model

Autoimmune disease

Project Title	Cannabinoid	Study Model
TRANSDERMAL DELIVERY OF 2-ARACHIDONOYL GLYCEROL (2-AG) FOR THE TREATMENT OF ARTHR	Endogenous (2-AG)	Animal

Inflammation

Project Title	Cannabinoid	Study Model
CANNABINOID EPIGENOMIC AND MIRNA MECHANISMS IMPACT HIV/SIV DISEASE PROGRESSION	Purified (THC)	Animal
CANNABINOID MODULATION OF MICROGLIAL RESPONSE TO THE HIV PROTEIN TAT	Purified and Synthetic (THC and CP55940)	Cell culture and animal models

Pain

Project Title	Cannabinoid	Study Model
BEHAVIORAL ECONOMIC ANALYSIS OF MEDICAL MARIJUANA USE IN HIV+ PATIENTS	Plant (cannabis cigarettes)	Human
CANNABINOID MODULATION OF HYPERALGESIA	Endogenous (AE and 2-AG via URB597 FAAH inhibitor and JZL184 MAGL inhibitor)	Animal
CANNABINOID RECEPTOR AGONISTS FOR TREATMENT OF CHRONIC PAIN	Synthetic (CB2 agonist, proprietary)	Animal
OPTIMIZING ANALGESIA BY EXPLOITING CB2 AGONIST FUNCTIONAL SELECTIVITY	Synthetic (CB2 agonists, proprietary)	Animal

Pain

Project Title	Cannabinoid	Study Model
PERIPHERAL FAAH AS A TARGET FOR NOVEL ANALGESICS	Endogenous (AE via FAAH inhibitor (URB937))	Animal
THE EFFECT OF VAPORIZED CANNABIS ON NEUROPATHIC PAIN IN SPINAL CORD INJURY	Plant (cannabis, vaporized)	Human

Psychiatric Disorder

Project Title	Cannabinoid	Study Model
CANNABIDIOL MODULATION OF ???-9-THC???S PSYCHOTOMIMETIC EFFECTS IN HEALTHY HUMANS	Purified (Cannabidiol)	Human
CANNABIS, SCHIZOPHRENIA AND REWARD: SELF-MEDICATION AND AGONIST TREATMENT?	Synthetic and Plant (Dronabinol & cannabis cigarettes)	Human

Seizures

Project Title	Cannabinoid	Study Model
NEW DRUGS TO ENHANCE ENDOCANNABINOID RESPONSES FOR TREATING EXCITOTOXICITY, PHASE	Endogenous (AE via FAAH inhibitors)	Animal

SUD, Withdrawal, and Dependence

Project Title	Cannabinoid	Study Model

SUD, Withdrawal, and Dependence

Project Title	Cannabinoid	Study Model
CANNABINERGIC MEDICATIONS FOR METHAMPHETAMINE ADDICTION	Synthetic (CB1 agonists and antagonists, proprietary)	Animal
EFFICACY AND SAFETY OF DRONABINOL (ORAL THC) FOR TREATING CANNABIS DEPENDENCE	Synthetic (Dronabinol)	Human
EVALUATION OF NOVEL PHARMACOTHERAPIES FOR THE TREATMENT OF OPIOID DEPENDENCE	Synthetic (Dronabinol, Nabilone)	Human
FAAH-INHIBITOR FOR CANNABIS DEPENDENCE	Endogenous (AE via PF-04457845 FAAH inhibitor)	Human
MARIJUANA RELAPSE: INFLUENCE OF TOBACCO CESSATION AND VARENICLINE	Sythetic (Dronabinol)+/- the noncannabinoid varenicline	Human
MEDICATIONS DEVELOPMENT FOR CANNABIS-USE DISORDERS: CLINICAL STUDIES	Purified (THC) and non-cannabinoids: Gabapentin & Tiagabine	Human
MONOACYLGLYCEROL LIPASE INHIBITORS FOR TREATING OPIOID USE DISORDERS + supplement	Endogenous (2-AG via JZL184 MAGL inhibitor)	Animal
NABILONE FOR CANNABIS DEPENDENCE: IMAGING AND NEUROPSYCHOLOGICAL PERFORMANCE + supplement	Synthetic (Nabilone)	Human
NOVEL MEDICATION APPROACHES FOR SUBSTANCE ABUSE	Synthetic (Dronabinol, Project 4)+noncannabinoid lofexidine	Human
NOVEL MEDICATIONS FOR CANNABIS DEPENDENCE	Synthetic (Modify THC and nabilone to create new cannabinoids)	Animal

SUD, Withdrawal, and Dependence

Project Title	Cannabinoid	Study Model
SATIVEX ASSOCIATED WITH BEHAVIOURAL-PREVENTION RELAPSE STRATEGY AS TREATMENT FOR + supplement	Purified (Sativex) +/- behavioral therapy	Human
STRESS-INDUCED MARIJUANA SELF-ADMINISTRATION: ROLE OF SEX AND OXYTOCIN	Plant (cannabis cigarettes)	Human
TREATMENT OF CANNABINOID WITHDRAWAL IN RHESUS MONKEYS	Purified (THC) and Endogenous (via AEA via FAAH inhibitors)	Animal

Independently Funded Studies Receiving Research Grade Marijuana - 1999 to present

This page was last updated May 2015

Subject: FW: LAYDOWN MATERIAL FOR FEB 23 ASSEMBLY
Attachments: Commercial_Marijuana (2).zip

From: Phelps, Dollynda
Sent: Monday, February 22, 2016 12:43 PM
To: Blankenship, Johni <JBlankenship@kpb.us>
Subject: LAYDOWN MATERIAL FOR FEB 23 ASSEMBLY

My dear Miss Blankenship, how's about one more for the laydown? It's very informative.

Did you ever get the links I sent last time?

Thank you so much!
Dolly

Sent from Windows Mail

Commercial Marijuana in Alaska

A Brief Overview By The

ASCA™

ALASKA SMALL CULTIVATORS ASSOCIATION™

Background..

On November 4th, 2014, 53% of Alaska's voters passed ballot measure 2, which decriminalized possession and transportation of up to one ounce of cannabis. It also decriminalized the cultivation of up to 6 plants per person in their own home.

In addition to the personal use provisions, the taxation and regulation of commercial cannabis was also authorized for communities willing to opt in.

After ballot measure 2 passed, a Marijuana Control Board was created and began drafting the regulations. The regulations became law February 21st, 2016.

So, Who Does What?

It all starts at the cultivation facility, where cannabis is grown. There are two types of cultivation licenses:

- Standard Cultivation
- Limited Cultivation

The only difference between the two, is the limited is only allowed to have 500 square feet of cultivation space. The standard, has no limit as far as state regulations are concerned.

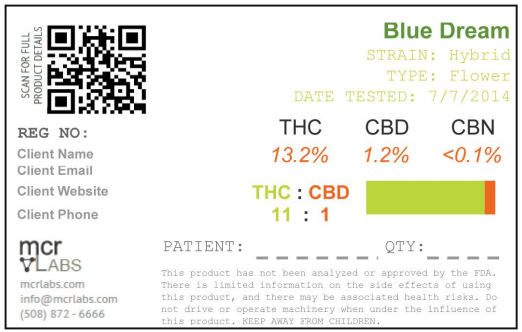
Where Does The Cannabis Go Next?

They are not allowed to sell anything (only exception is live plants), unless they run all their products through the next facility type first:

- Testing

The testing facility is a separate entity, that is not allowed to have any vested interest in any of the other facility types.

They test for molds, pesticides, chemicals, etc. They also provide a THC/CBD potency profile.



It Passes Testing, Now What?

Once the product passes testing, it can be sold. When a cultivator is selling their products to the manufacturer, more than likely they will be making some of these products, using raw cannabis:

Cosmetics

Concentrates

Edibles

Raw Cannabis Products

Raw cannabis products are sold in tamper-evident and smell proof packaging as shown below.

Medicine Jar

Glass Jar With Seal

Double Sealed Plastic

So, Who Sells To Consumers?

The retailer is the only license type that is authorized to sell cannabis products. They can sell any manufactured product or raw cannabis products so long as the products passed testing.

Preventing Access To Minors, Public Safety, and Education

All employees and licensees must be 21 and over and must complete a Marijuana Handler Course, which is similar to a Training For Alcohol Professionals (TAP) Card. They will receive training on how to identify someone under the influence and will also be taught how to check ID’s properly. They must also learn all of the marijuana laws in Alaska during the course.

Facility Security

Every facility must ensure that all of their products and cash are under lock and key. Each facility must also place cameras in each room of their facility and at each entrance. Exterior lighting is required in order to capture usable footage.

Commercial locks and doors must be installed on all entrances.

Plants over 8” or over must be tagged and tracked by a state managed tracking system provided by Franwell, until point of sale at the retailer.

Traveling with cannabis products, must be done with a manifest similar to how a shipping company works.

Managing Cash

Considering that there are generally no banking services for cannabis businesses at this time, everything must be done with cash.

This includes everything from product sales, to payroll.

Numerous folks will more than likely use an outside security service and will have regularly scheduled pick ups, to reduce the amount of cash they have on hand.

Others will install robust safes and ensure that all their security systems are reliable. Some may even hire a security guard.

Alaska’s Edibles: Potency Limits

Alaska’s edibles regulations are unique to other state’s. Alaska has set the following limits for edible potency:

- 5/mg THC per serving.
- 10 servings per package.
- 50/mg THC per package.

Colorado’s edible regulations were much more lenient in allowing 10/mg per serving as shown in the example on the right.

Alaska’s Edibles: Packaging, Not To Target Minors

It would be best to quote this regulation directly:

AAC 306.565 (b) A container or packaging for any edible marijuana product produced by a marijuana product manufacturing facility may not have any printed images, including cartoon characters, that specifically target individuals under the age of 21.

Packaging and Warning Labels For All Products

All products are going to require tamper-evident and smell proof packaging. Doesn’t matter if it is raw flower, or a skin care product. In addition to the packing requirements, there must be a set of labels attached.

1. Batch, lot number, and originating cultivation facility information on each product (barcode).
2. Warning labels, which warns consumers about the risks and dangers associated with cannabis use.
3. STRICT: **For use only by adults twenty-one and older. Keep out of the reach of children!**
4. Potency profile, such as the THC/CBD percentages, as well as the testing facilities information.

Who Manages All Of This?

It is a combined effort between the local municipality and the Alcohol and Marijuana Control Board (AMCO). All initial applications are submitted to the AMCO board by the applicant online. Once the application is deemed complete by the AMCO board, it is forwarded to the local municipality.

The municipality and AMCO board will exchange information and approve/deny the license. Both the local municipality and AMCO board are able to inspect a facility at any time.

Numerous factors will be involved when it comes to issuance/denial/renewal of licenses. So long as an applicant is an a “green zoned” area, meets all of the state licensing requirements, and passes their inspections, product testing, and pays their taxes, they should be fine. Otherwise there will be consequences...

What Are The Consequences?

If an applicant fails to pass inspections, fails to pass testing regularly, and/or gets caught breaking any of the regulations...they are subject to the following:

1. Loss of their license, and forfeiture of their products/raw cannabis.
2. Civil penalties ranging between $10,000 and $50,000 depending on the severity and/or occurence. Continued repeat offenses will result in loss of license ultimately.
3. Criminal charges when found to be selling to minors.

Public Protest Option

Every neighborhood is different. There may be daycare centers that a licensee may not know about. There may be a small private school, that they did not know about. This is where the public protest option comes into play.

Any time a licensee initiates a new application, they must notify the public and their neighbors in their area. Here is how that is done:

1. They post a notice on their premises and another posted notice, in a conspicuous location near the premises, more than likely an entrance to a small neighborhood, or subdivision.
2. They place an advertisement in either the local newspaper or radio, once a week, for three weeks.

What Information Is On The Notice and Advertisement?

1. Name of the Facility
2. Name of the Licensee
3. Location of Facility
4. Facility Type
5. Information on how to protest to the State Marijuana Control Board.

Example

What About Those Tax Revenues?

Tax revenues. One of the major benefits of the industry. All cannabis flower, is excise taxed.

1. Every ounce is taxed at the rate of $50.00.

In addition to excise taxes, each product sold at the retail store, is more than likely taxed as well. This is generally your “local tax”.

Licensing Fees

Licensing fees for each establishment type ranges between $1,000 and $5,000 annually. Those licensing fees will be sent to the state, split in half and/or portioned between the local municipality and the state.

Public Engagement

Everyone may participate in the process of developing future regulations as well as ensuring that public safety is upheld.

At any time, any member of the public may contact their local municipality, alcohol and marijuana control board, and in most cases, the licensee.

When you have a concern, bring it up, let’s discuss it and ensure the regulations are fair and protect the best interests of the public. Let’s lead by example with public engagement and involvement.

Thank you for reviewing this presentation!