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UNLV Center for Democratic Culture
Edited by Dmitri N. Shalin

The Social Health of Nevada

Leading Indicators and Quality of Life in the Silver State

Addiction and Substance Abuse among Nevada Youths

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Adolescence is a critical stage for substance abuse initiation, as well as for substance abuse prevention, intervention, and treatment. This report presents tobacco product use, alcohol use, and illicit drug use rates of Nevada's youths (aged 12-17) compared with youths nationwide as a whole. Most data were retrieved from the Substance Abuse and Mental Health Services Administration (SAMHSA), including the 2008--2009 National Survey on Drug Use and Health (NSDUH) data and Treatment Episode Data Set (TEDS), supplemented with the Centers for Disease Control and Prevention (CDC)'s 2009 Youth Risk Behavior Survey (YRBS) data. Substate data were taken from SAMHSA's 2006-2008 NSDUH data, the most updated substate data available so far. The 2010 NSDUH state-level data won't be released by SAMHSA until 2012.

The data indicate that the general trends among Nevada youths were comparable with youths nationwide with respect to

Chapter Highlights

- Nevada youth had statistically significantly higher rates in overall illicit drug use, marijuana use, and nonmedical use of pain relievers than U.S. youths.
- Nevada adolescents were ranked second to the worst tier for their past-year "alcohol dependence or abuse" and the worst tier for their past-year "alcohol dependence.
- In 2009, Nevada youths accounted for 3.6% of the total primary heroin admissions in the Silver State, whereas the rate was 0.5% for youths nationwide.

How to Cite this Report

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tobacco product use, cigarette use, alcohol use, and binge alcohol use. However, Nevada adolescents did worse than U.S. youths in the area of illicit drug use. Nevadans had statistically significantly higher rates in overall illicit drug use, marijuana use, and nonmedical use of pain relievers than U.S. youths; they were also among the states in the worst tier for their cocaine use, illicit drug dependence or abuse, illicit drug dependence, and "needing but not receiving treatment for illicit drug use." In addition, although Nevada youths were in line with U.S. youths regarding their alcohol use and binge alcohol use, they were ranked second to the worst tier for their "alcohol dependence or abuse" and ranked among the worst tier for their alcohol dependence.

How Nevada Youths Compare Nationwide

Tobacco Product Use

In line with the national trends, Nevada youths have made statistically significant progress in reducing their past-month tobacco product use and cigarette use in the past decade. There is no statistically significant difference between Nevada youths and U.S. youths for tobacco product use rate (11.98% and 11.52%, respectively) or cigarette use (9.46% and 8.99%, respectively) in 2008-2009. For tobacco product and cigarette use, Nevada youths were ranked 3rd tier (middle tier, with 5th tier being the worst and 1st tier being the best) by SAMHSA. Within the state, there is no statistically significant difference among youths in Clark County, Rural area (15 counties, including Carson City), and Washoe County for tobacco product use rate (11.29%, 14.68%, and 13.14%, respectively) or cigarette use rate (10.01%, 12.1%, and 10.91%, respectively).

Alcohol Use

U.S. youths significantly decreased their past-month alcohol use rate from 17.67% in 2002--2003 to 14.66% in 2008-2009 ($p = 0.000$); Nevada youths also appeared to decrease their alcohol use rate from 18.40% in 2002-2003 to 15.15% in 2008--2009 ($p = 0.065$, statistically approaching significance). The NSDUH data show no statistically significant difference between Nevada youths and youths nationwide concerning alcohol use, and Nevada youths were ranked 3rd tier in this regard. Consistent with the NSDUH finding, the YRBS found no statistically significant difference between Nevada youths and youths nationwide in the following categories: (a) "had at least one drink of alcohol on at least 1 day (during the 30 days before the survey)" (38.6% for the Nevada youths and 41.8% for U.S. youths), and (b) "ever had at least one drink of alcohol on at least 1 day (during life)" (73.2% and 72.5%, respectively).

Nevada youths appeared to decrease their past-month "binge alcohol use" from 10.90% in 2002--2003 to 9.30% in 2008--2009, but the change is statistically insignificant, unlike U.S. youths, who made statistically significant progress in this regard (from 10.65% to 8.82%, $p = 0.000$). Nonetheless, there is no statistically significant difference between the two groups concerning binge alcohol use rate in 2008-2009, and Nevada youths were ranked 3rd tier. YRBS supports the NSDUH finding that Nevada youths were comparable to U.S. youths with respect to binge alcohol use. YRBS shows no statistically significant difference between Nevada youths and U.S. youths concerning "had five or more drinks of alcohol in a row within a couple of hours on at least 1 day

(during the 30 days before the survey)" (22.0% vs. 24.2%). YRBS also shows that U.S. youths were more likely than the Nevada youths to "drive when drinking alcohol one or more times (in a car or other vehicle during the 30 days before the survey)" (9.7% vs. 7.3%, $p = 0.01$) and to "ride with a driver who had been drinking alcohol one or more times (in a car or other vehicle during the 30 days before the survey)" (28.3% vs. 23.0%, $p = 0.00$).

Although Nevada youths are in line with youths nationwide concerning alcohol use and binge alcohol use, they were ranked second to the worst tier for their past-year "alcohol dependence or abuse" and the worst tier for their past-year "alcohol dependence," along with youths in Oregon, New Mexico, Montana, Wyoming, South Dakota, Iowa, Indiana, New York, and New Hampshire. (Note: "alcohol use" is not necessarily a problematic behavior, but "alcohol dependence" and "alcohol abuse" are disorders leading to problematic behaviors, based on the *Diagnostic and Statistical Manual of Mental Disorders* criteria). Nevada youths did not statistically significantly improve their "alcohol dependence or abuse" rate (6.93% in 2002--2003 and 5.46% in 2008--2009), whereas U.S. youths did (from 5.88% to 4.73%, $p = 0.000$). Neither U.S. nor Nevada youths made statistically significant progress from 2002-2003 to 2008-2009 for their alcohol dependence rate (2.09% and 1.91% for U.S. youths; 2.23% and 2.22% for Nevada youths).

There was no statistically significant difference between Clark (13.60%) and Rural (17.89%), between Clark and Washoe (15.99%), or between Rural and Washoe, concerning alcohol use rate. Rural (12.65%) had a statistically significantly higher binge alcohol use rate than Clark (8.25%, $p = 0.027$), whereas there was no significant difference between Clark and Washoe (11.32%) or between Washoe and Rural. Also, no statistically significant difference exists among the three substates for alcohol dependence (2.24% for Clark, 2.14% for Rural, and 2.19% for Washoe) or "alcohol dependence or abuse" (6.06%, 7.00%, and 7.08%, respectively).

Illicit Drug Use

Nevada youths' past-month illicit drug use rate in 2008--2009 was statistically significantly higher than the U.S. rate (12.57% versus 9.65%, $p = 0.008$). They were also ranked the worst category in this regard, along with Oregon, New Mexico, Montana, Colorado, Alaska, Vermont, New Hampshire, Rhode Island, and Washington, D.C. U.S. youths significantly decreased their illicit drug use from 2002-2003 (11.44%) to 2008-2009 (9.65%, $p = 0.000$); Nevada youths did not (12.46% and 12.57%, respectively). The gap between Nevada and U.S. youths appeared to be wider for illicit drug use than for alcohol use. Consistent with the NSDUH finding that Nevada youths had a higher illicit drug use rate than U.S. youths, the YRBS found that Nevada youths were significantly more likely than U.S youths to be "offered, sold, or given an illegal drug by someone on school property (during the 12 months before the survey)" (35.6% versus 22.7%, $p = 0.00$).

Nevada youths, compared to youths nationwide as a whole, had a statistically significantly higher past-year marijuana use rate (16.4% versus 13.28%, $p = 0.017$) and higher past-month marijuana use rate (8.97% versus 6.98%, $p = 0.039$) in 2008--2009. U.S. youths made a statistically significant decrease in past-year marijuana use (from

15.38% in 2002--2003 to 13.28% in 2008-2009, $p = 0.000$) and past-month marijuana use (8.03% and 6.98%, respectively, $p = 0.000$), whereas Nevada youths did not (19.67% and 16.40%, respectively, for past-year marijuana use; 9.58% and 8.97%, respectively, for past-month marijuana use). Nevada youths were ranked the worst tier for both their past-year and past-month marijuana use. Nevada youths also had a statistically significantly higher "first use of marijuana" rate than U.S. youths (7.16% versus 5.7%, $p = 0.018$) and were ranked the worst tier in this regard. Youths nationwide significantly decreased their first use of marijuana rate (from 6.57% in 2002--2003 to 5.7% in 2008--2009, $p = 0.000$), whereas Nevada youths did not (8.42% and 7.16%, respectively).

Nevada youths had a statistically significantly higher past-year nonmedical use of pain relievers rate than U.S. youths (8.34% versus 6.51%, $p = 0.033$) and were ranked 5th tier (along with Oregon, Washington, Idaho, New Mexico, Oklahoma, Arkansas, Mississippi, Indiana, and Kentucky). U.S. youths statistically significantly decreased their nonmedical use of pain relievers from 7.61% in 2002--2003 to 6.51% in 2008--2009; Nevada youths did not (9.61% and 8.34%, respectively). For cocaine use, although all four age groups of Nevadans did not have a significantly higher rate than their corresponding U.S. age groups, the youths group was ranked 5th tier (along with California, Idaho, Arizona, Colorado, New Mexico, Alaska, Rhode Island, Connecticut, and Hawaii) and all other age groups, 4th tier.

U.S. youths statistically significantly decreased their illicit drug dependence or abuse from 2002--2003 (5.35%) to 2008--2009 (4.46%, $p = 0.000$), whereas Nevada youths did not (5.98% and 5.01%, respectively). Although Nevada youths did not have a statistically significantly higher "illicit drug dependence or abuse" rate than U.S. youths, they were ranked 5th tier in this respect. Nine other states were in the 5th tier: California, Wyoming, Oregon, Idaho, Colorado, Indiana, New Mexico, South Dakota, and New Hampshire. For illicit drug dependence rate, although all four age groups of Nevadans were not statistically significantly higher than their corresponding U.S. age groups, only the youths group was ranked 5th tier (along with Oregon, Washington, Idaho, Wyoming, Colorado, New Mexico, Indiana, New Hampshire, and Rhode Island).

No statistically significant difference exists for any of the above-mentioned illicit drug use rates among Clark, Rural, and Washoe; for past-month illicit drug use (11.79%, 11.90%, and 12.49%, respectively), past-month marijuana use rate (7.68%, 9.41%, 9.39%, respectively), past-year marijuana use rate (14.45%, 16.26%, and 16.96%, respectively), first use of marijuana rate (5.65%, 7.02%, and 7.10%, respectively), nonmedical use of pain relievers (8.99%, 9.85%, and 8.10%, respectively), cocaine use (2.21%, 2.07%, and 2.37%, respectively), illicit drug dependence (2.79%, 2.91%, and 2.79%, respectively), or "illicit drug dependence or abuse" (5.24%, 5.43%, and 5.66%, respectively).

Youths' Proportion of Total Treatment Admissions

The TEDS, in conjunction with NSDUH data, may additionally offer us some possible

insight concerning substance abuse trends among Nevada youths. Figure 1 shows that the proportion of Nevada youths of total Nevada treatment admissions was lower than that of U.S. youths of total U.S. treatment admissions prior to 1999, but it has become greater than that of the U.S. youths since 2000. The TEDS findings alone do not necessarily prove Nevada youths have a greater substance abuse problem than U.S. youths in the past decade because these results may reflect various factors (e.g., admission policies). Nonetheless, the TEDS findings in the past decade or so showed a relatively consistent direction, compared to the NSDUH and YRBS findings, concerning substance abuse among Nevada youths.

The proportion of cases involving primary heroin admissions for Nevada youths (12 -- 17) has risen since 2003 (but declined somewhat from 2008 to 2009; see Figure 2) and for Nevada young individuals (12 -- 20) since 2006 (see Figure 3). In 2009, Nevada youths accounted for 3.6% of the total primary heroin admissions in Nevada, whereas the rate was 0.5% for youths nationwide. (Although the total frequency of heroin admissions in Nevada TEDS was only 888 and 3.6% of 888 only yields 32 adolescent frequencies, the trend of young individuals' involvement with heroin admissions in Nevada becomes more obvious when combining the age groups of 12 to 17, 18 to 20, and 21 to 25. The rate was 21.5% for Nevadans aged 18--20 years versus only 5.7% for their U.S. counterparts. In other words, more than 25% of the total primary heroin admissions in Nevada were from individuals aged 12 to 20, compared to only 6.2% for their U.S. counterparts. Furthermore, Nevadans aged 12 to 25 accounted for more than half of the total primary heroin admissions; the rate was less than a quarter for their U.S. counterparts.) Like heroin, the proportion accounted for by primary "other opiates" at admission for Nevada youths has also risen since 2004; it was 5.2% for Nevada youths and 2.1% for U.S. youths in 2009 (see Figure 4). This TEDS finding is consistent with the 2008--2009 NSDUH finding that Nevada youths had a statistically significantly higher rate of nonmedical use of pain relievers than U.S. youths.

Amphetamines are one major illicit drug that affects Nevadans. Nevada youths shared a similar trend of amphetamine admissions with U.S. youths prior to 1999; however, from 1999 to 2005, the Nevada trend accelerated, whereas the U.S. trend descended and remained flat afterwards. Both trends descended since 2006. (See Figure 5.) Marijuana is one major illicit drug used/abused by young people. Figure 6 shows that prior to 1999, Nevada youth admissions for primary marijuana abuse accounted for a lower proportion of the total Nevada admissions than U.S. youths did of the total U.S. admissions; however, after 2000, Nevada youths constituted a greater proportion than U.S. youths did. Although this change could be attributed to various factors, it reinforces the 2008--2009 NSDUH finding that Nevada youths have significantly higher rates of past-month, past-year, and first use of marijuana than U.S. youths.

Needing But Not Receiving Treatment

In 2008--2009, Nevada youths were ranked 4th tier in the category "needing but not receiving treatment for alcohol use" and 5th tier in the category "needing but not receiving treatment for illicit drug use." Within the state, no statistically significant difference existed among Clark (5.8%), Rural (6.29%), and Washoe (6.69%) for needing but not receiving treatment for alcohol use, or for needing but not receiving treatment for illicit drug use (4.88%, 4.90%, and 5.41%, respectively).

Conclusion

Although not all data used for this report came from the identical year or years and not all major drug use rates could be gleaned from all data sources, the available information allows meaningful analyses.

Considering the fact that the younger the age of a person's onset of drug use, the higher the likelihood of the person's later development of addiction, it is critical for us to reach out to our youths through age-specific prevention, intervention, and treatment, targeting their illicit drug use, abuse, and dependence problems, especially in the areas of heroin use, nonmedical use of pain relievers, and marijuana use, in addition to amphetamines use and cocaine use. Heroin is much more addictive than many other legal or illegal drugs, creating physical harm and dependence. Nonmedical use of pain relievers is not only a problem in itself but may also bring about heroin use when the person's pain reliever supply is no longer available. Marijuana dependence carries its own dangers and harmful effects, although many people may not consider it a core drug. It may also be a gateway drug, leading to other more severe drug use.

We should explore why Nevada youths were among the states in the worst tier for their alcohol dependence, in spite of their being equivalent with U.S. youths in alcohol use and binge alcohol use. Earlier age of onset of drinking, self-medicating beyond simple experimenting, and deprivation of resources and social capital may all facilitate moving from use to abuse or dependence.

Finally, our state includes both urban and rural areas. Although the available data show no statistically significant difference among the three areas for most cases, youths of the Rural area indicated a significantly higher level of binge alcohol use than youths of Clark County. Geographically sensitive prevention and treatment strategies need to be developed and applied to help youths in different areas.

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Appendix

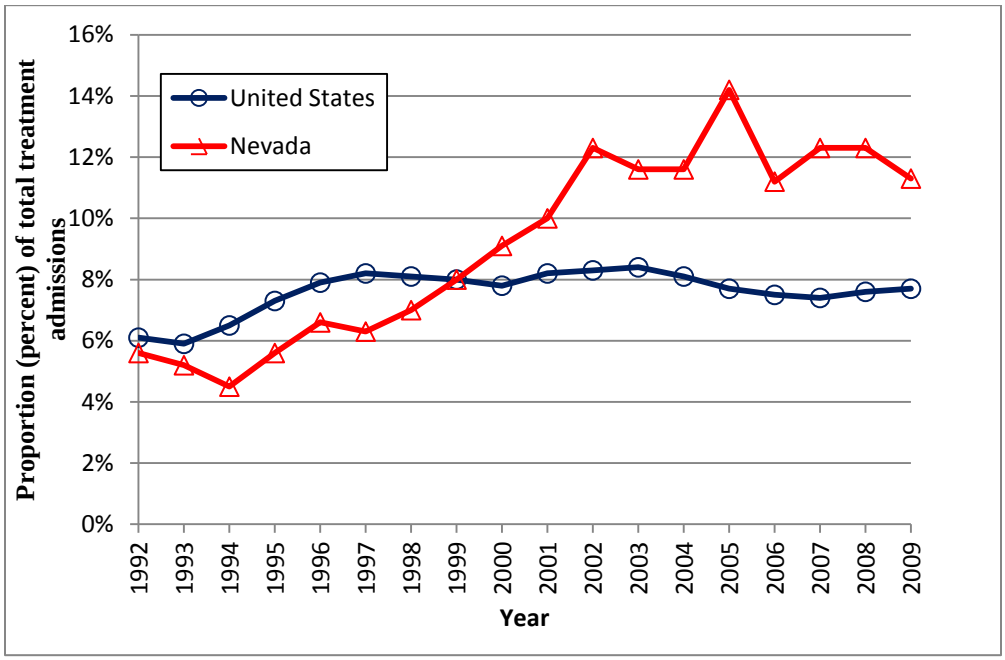

Figure 1. Proportion of Nevada youths (aged 12--17) of the total substance abuse treatment admissions in Nevada (red line) versus proportion of U.S. youths of the total substance abuse treatment admissions in U.S. (blue line): 1992—2009

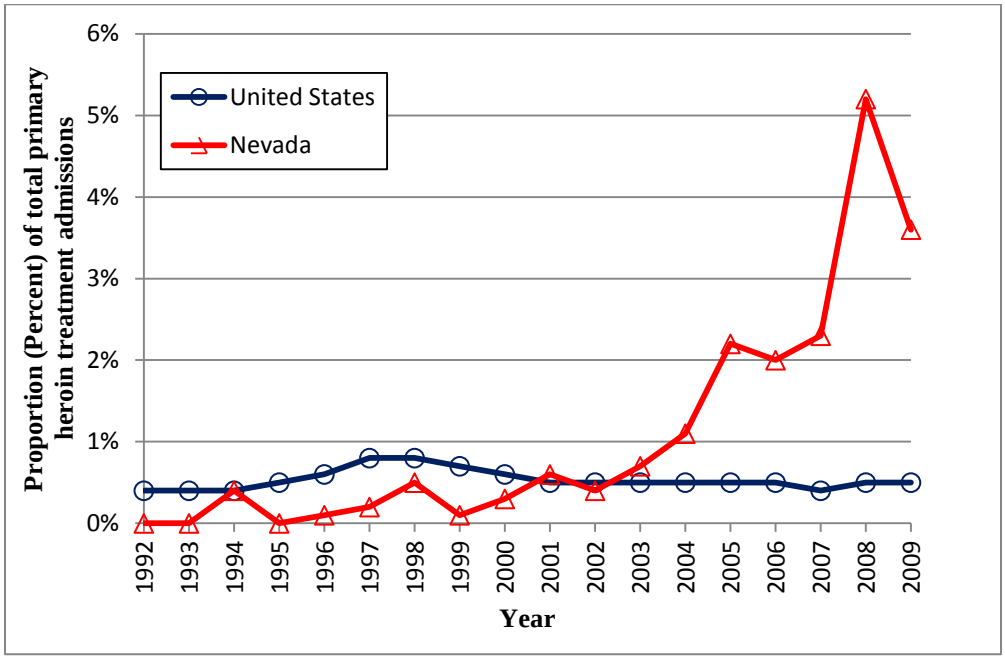

Figure 2. Proportion of Nevada youths (aged 12--17) of the total primary heroin treatment admissions in Nevada (red line) versus proportion of U.S. youths of the total primary heroin treatment admissions in U.S. (blue line): 1992—2009

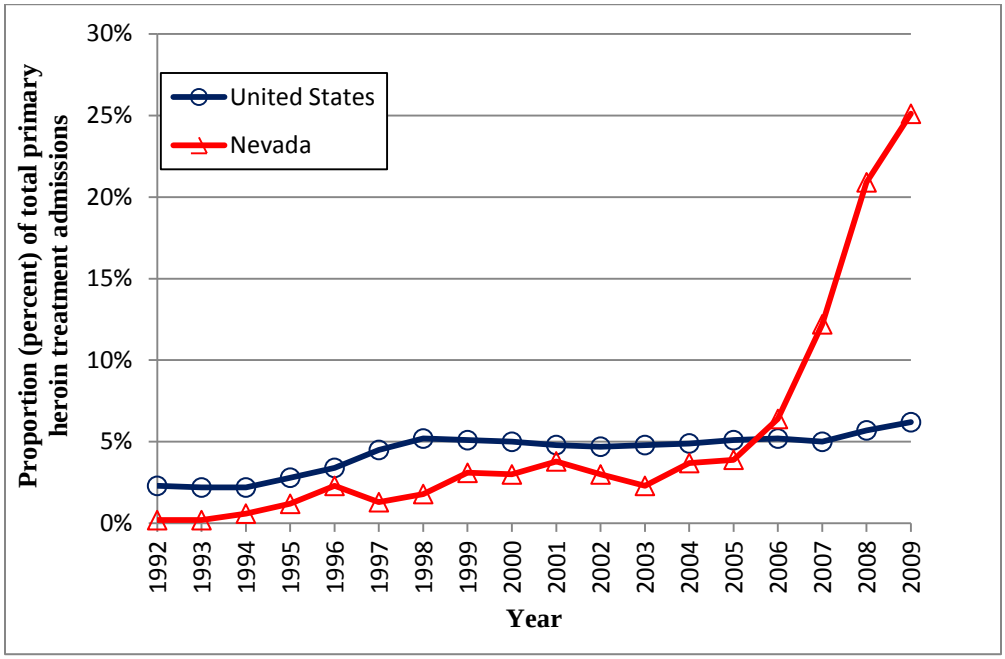

Figure 3. Proportion of Nevada young individuals (aged 12--20) of the total primary heroin treatment admissions in Nevada (red line) versus proportion of U.S. young individuals of the total primary heroin treatment admissions in U.S. (blue line): 1992—2009

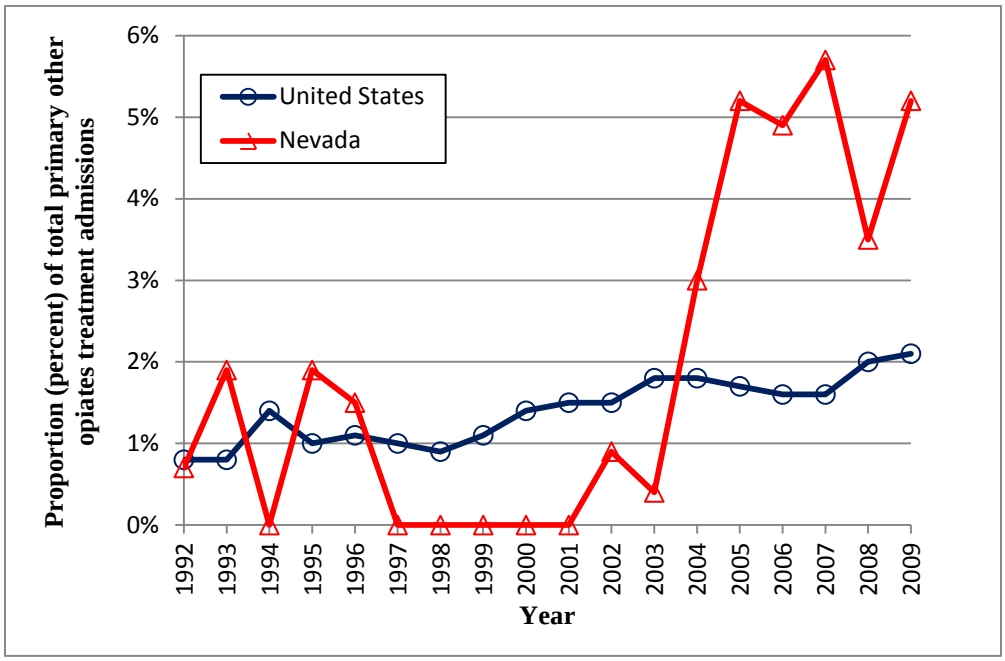

Figure 4. Proportion of Nevada youths (aged 12--17) of the total primary "other opiates" treatment admissions in Nevada (red line) versus proportion of U.S. youths of the total primary other opiates treatment admissions in U.S. (blue line): 1992—2009

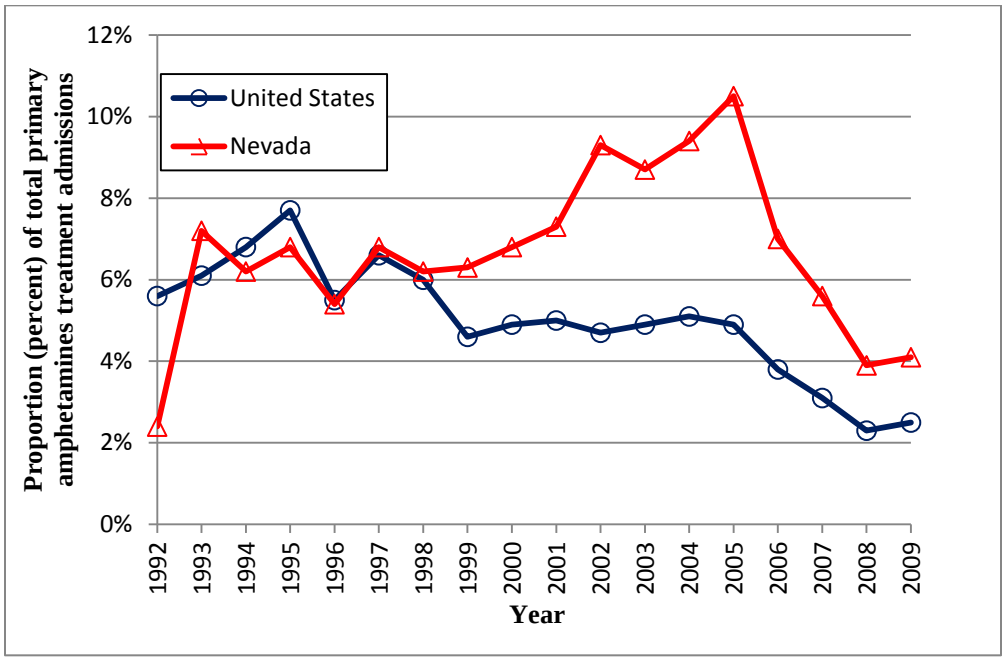

Figure 5. Proportion of Nevada youths (aged 12--17) of the total primary amphetamines treatment admissions in Nevada (red line) versus proportion of U.S. youths of the total primary amphetamines treatment admissions in U.S. (blue line): 1992--2009

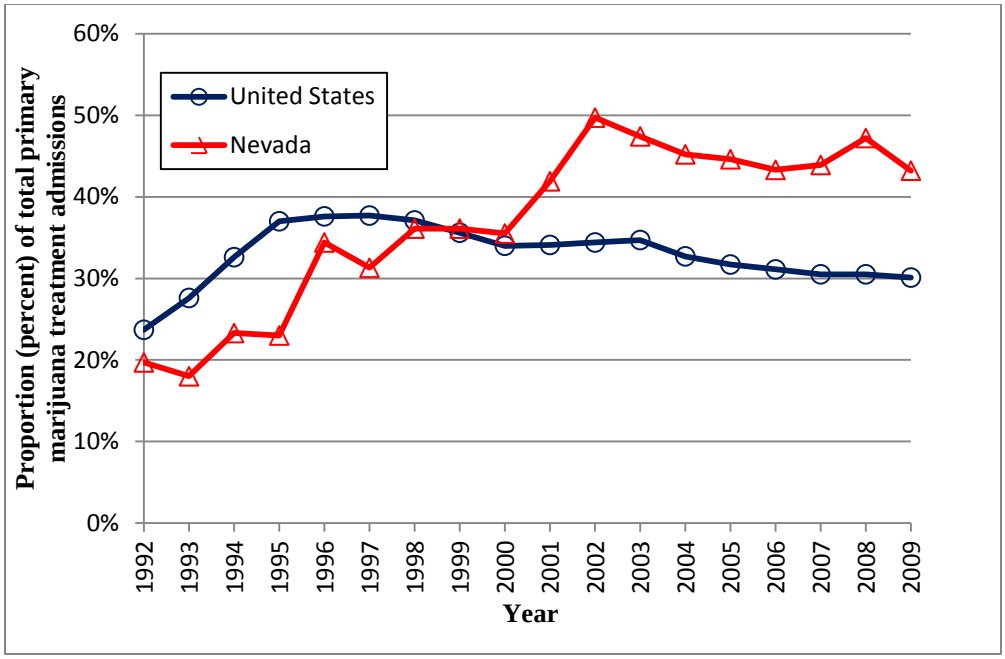

Figure 6. Proportion of Nevada youths (aged 12--17) of the total primary marijuana treatment admissions in Nevada (red line) versus proportion of U.S. youths of the total primary marijuana treatment admissions in U.S. (blue line): 1992--2009