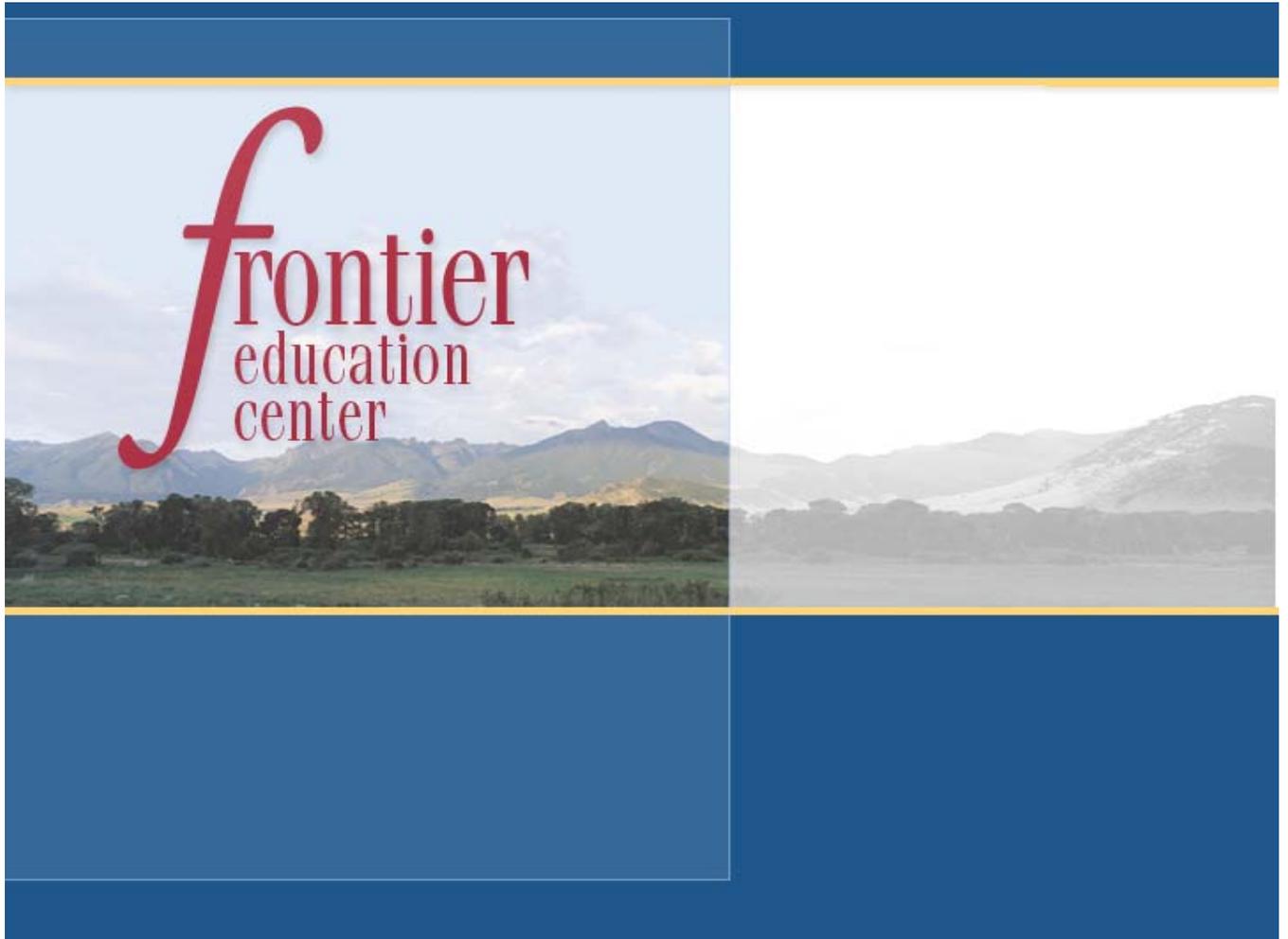


Frontier Youth: Living on the Edge

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EXECUTIVE SUMMARY

Many Americans believe that rural and frontier youth and their families live relatively uncomplicated lives, free from the stress and temptations of urban and suburban life. However, the reality is far different. High poverty rates, the nation's highest suicide rate, increasing illicit drug use and other data paint a picture of communities in need of access to comprehensive services for all youth and their families and prevention programs to reduce high risk behaviors.

Support for existing and new programs is essential to meeting the health and human service needs of the people who live in frontier America, and to address the special needs of frontier youth.

Little research or data has been generated specifically on frontier populations. This paper, *Frontier Youth: Living on the Edge*, provides the latest information on frontier youth and provides recommendations and resources for further study. It is an attempt to start a dialogue and spur action to address the needs of frontier communities. Due to the lack of research, rural data has been used where frontier data does not exist.

The first section, "Behavioral Health Risks," summarizes high-risk behaviors that are increasing among rural and frontier youth and presents some of the differences between rural and urban youth. Current research on teen alcohol and substance use and abuse, weapons carrying and violence, sexual activity, violent behavior and victimization, suicide, and educational attainment and drop out rates is presented.

The second section, "Prevention Principles and Strategies," discusses the effectiveness of community-based, family-based, and school-based prevention techniques in small communities.

The third section of the paper discusses the need to specifically address the challenges facing frontier youth today and the fourth section provides recommendations to increase both research and resources for programs that target this unique group of young people.

The paper ends with "Resource Links" to foster research and sharing of ideas in order to create and improve programs in frontier schools and communities.

"I had talked with rural teachers before and they often told me how angry their kids were, especially during the height of the recent farm crisis. Those rural kids were resentful, and I think a little hurt, that the rest of the country seemed so indifferent about their plight. Some of them felt betrayed that the folks for whom they grow food seemed not to care about them, their families, and what was happening to them."

Rural Matters, Peter Beeson, 2002

FRONTIER YOUTH: LIVING ON THE EDGE

Note: All references to “frontier” use the Consensus Definition of the Frontier Education Center unless otherwise indicated (www.frontierus.org/rep_geog.html#definition). This definition has not been adopted by any federal programs, but has been adopted as policy by the Western Governors Association (http://www.frontierus.org/pol_wga.html) and the National Rural Health Association. The Consensus Definition weights three elements – population density, distance in miles and travel time in minutes - which together, generally describe the geographic isolation of frontier communities from market and/or service centers. The Center understands that various programs will establish their own programmatic definitions and eligibility criteria.

INTRODUCTION

The enduring American frontier stretches across more than half the land area of the United States, with a sparse population of less than 8 million, or 4% of the population. Overall, frontier residents are younger and older, poorer, more dependent on agriculture, and more medically uninsured than the rest of the U.S. population. For example, on average, children and youth under age 18 comprise 26.7% of the population in frontier areas as compared to 25.7% in other areas of the country, while people aged 65 and older make up 14.8% of the population of frontier areas as compared to 12.4% in other parts of the country.

A higher rate of frontier people live in poverty than those living in most other rural and urban parts of the country. All of the 50 poorest counties in the United States are included on the Frontier Education Center’s list of frontier counties. Frontier counties account for 42 of the nation’s 100 counties with the highest child poverty rates and 202 of the 500 counties with the lowest per capita income (Save the Children, 2002). Such high poverty rates are largely the result of the structure of the frontier economy. People in frontier areas are poor, not because they do not work, but because their jobs do not pay them enough to lift them out of poverty (Lynch & Kaplan, 1997).

Overall, youth in the United States are at risk at rates several times higher than their counterparts in other developed countries for alcohol and drug use, other high-risk behaviors, suicide, and homicide (Krug, Powell, and Dahlberg, 1996; Krug, Powell, and Dahlberg, 1998, cited in Dahlberg and Potter, 2001). While young people in the frontier may at one time have been protected from some of the stresses and challenges of urban life, whatever gap may have existed is definitely closing. In some cases, the prevalence of high-risk behaviors in rural youth has surpassed that of urban and suburban young people. Public perceptions, heavily influenced by media that largely focuses on urban youth, however, have not kept up with these changes. The image of rural areas as safe havens persists.

Rural and frontier youth and their families are subject to the same stresses and temptations as their urban and suburban counterparts. Contrary to the picture painted by the media, the reality is that young people living in remote areas of the United States are at similar or greater risk for alcohol and drug use and abuse, suicide, other high risk behaviors such as weapon carrying and unprotected sex, and are less likely to attend or finish college, than urban and suburban youth.

The literature that explores adolescent high-risk behavior and prevention strategies largely ignores the special issues that affect rural youth and certainly neglects issues that affect those living in the frontier. For example, a recent review of the literature on school violence and suicide prevention found mention of urban/rural differences in only a handful of articles (Corinne, 2002).

Many researchers use the metropolitan and non-metropolitan classification system of the Census Bureau. Others use a variety of factors such as counties containing a core city with a population of more than 500,000, population density of less than 1,000 people per square mile, and proximity to central cities with populations of 500,000 to one million in distinguishing urban from rural. In many studies, urban, or metropolitan, areas are defined, while rural, or non-metropolitan, areas have a default definition - an area that is not urban. The Frontier Education Center uses the Consensus Definition based on a matrix and consults with the states on its application.

Statistics describing rural youth will be used as indicators of conditions in the frontier whenever specific frontier data is unavailable. Since there are large differences not only between what differentiates rural areas from urban areas but also between rural and frontier communities, some data is very place-based and not universal. There is data from the 1990's mostly produced by the former Frontier Mental Health Services Network, a five-year project no longer funded.

Presented below is data on the behavioral health risks facing youth living in rural areas and frontier communities. Prevention principles and strategies are discussed, including how community-based, family-based, and school-based prevention strategies are vital to the well being of frontier communities. The conclusion identifies the necessity of addressing the specific needs of a frontier community and conducting further research. Recommendations are presented to increase the research and resources targeting frontier youth. Last, resource links are provided to facilitate further research and the sharing of ideas.

BEHAVIORAL HEALTH RISKS

Serious Emotional Disturbance

In 1998, the federal government finalized a rule establishing a methodology for estimating the incidence of Serious Emotional Disturbance (SED) in children. The final rule was published in July of 1998. For more detailed information on this methodology, the Final Rule is found in the Federal Register, July 17, 1998, Volume 63 No. 137 p 38661, at http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=1998_register&docid=98-19039-filed

Two alarming points related to estimating the SED rate in children should be noted. First, the decision to begin with 9 year olds was not made because there is no SED in younger children. Rather the decision was made because there is a lack of research on children from birth to 8 years old, making accurate estimation difficult. The decision to begin with 9 year olds may result in an understatement of the problem for all children, regardless of what type of community.

The second point raises a more difficult issue: the relationship between poverty rates and incidence of SED among children. As poverty increases, so does the rate of SED (see Appendix A for a state by state listing of 1995 rates). The rate of poverty generates increased funding for the treatment of what appears to be a partially preventable problem. Measures to reduce or eliminate poverty may in the long term be more cost effective than the treatment of emotional disturbances. Financially and ethically, there are numerous reasons to increase prevention measures that have the ability to ameliorate a lifetime of economic and socio-psychological disruption.

Self-Reported Risk Behaviors

Drinking, physical abuse, and other behavior problems are most frequently reported by rural youth to their health professionals. Rural youth rank health professionals near the bottom when they list people they most trust with their problems. This may result from frequent turnover of health professionals, such that too often patients do not have a chance to develop a strong relationship with a provider.

The American Psychological Association (APA) recently surveyed 2,148 New Mexico youth aged 12 to 18 and found that at some point in their lives, these teens felt that they had “too many problems to handle,” with more than half choosing “not to seek outside help, even from friends” (APA, n.d.). An earlier study of 4,300 high school students in 52 rural Minnesota counties found that while 61% of students were not depressed and seemed to handle their problems in constructive ways, 39% suffered from mild to severe depression and often acted out passive or negative behaviors in their attempts to deal with their problems (Walker, 1986).

Poverty and behavioral health issues seriously affect the home life of young people. Parents, family members, and/or friends who engage in risky behaviors, such as drinking, smoking cigarettes and/or marijuana, or using other types of drugs, are among the risk factors and influences which help determine whether young people decide to engage in negative or risky behaviors.

Alcohol and Drug Use

As used in this paper, the term ‘drug use’ is very broad. It includes the use and abuse of illegal drugs or underage use of legal drugs, abuse of legal products such as spray paints and other items abused as inhalants, as well as the abuse of prescription drugs.

Drug use varies among communities, whether urban, rural, or frontier. However, the overall picture is remarkably similar: young people in every community in the country are affected in some way by alcohol, tobacco, and other drugs—whether it be through their own use, or use by their peers and/or family members (Conger, 1997).

Joseph Califano, former Secretary of DHHS, and now Chairman and President of the Center on Addiction and Substance Abuse, noted in the forward of a report on drug abuse in mid-size cities and rural areas that “most Americans persist in seeing drugs as an overwhelmingly urban problem. We must increase our efforts in rural areas and mid-size cities while maintaining our

efforts in large urban centers” (Center on Addiction and Substance Abuse (CASA), 2000, p. ii, p. iv).

The CASA report, commissioned by the U.S. Conference of Mayors, found differences between rural and urban youth substance use and risk factors. The report found that for some drugs rural youth demonstrated both higher levels of use and risk factors than their urban counterparts.

Several other studies document that alcohol use by 8th, 10th, and 12th grade youth in frontier, rural, and urban areas is much greater than that of other illicit drug use. Analysis of data collected in 1992 and 1993 by the American Drug and Alcohol Survey (ADAS) of more than 225,000 8th and 12th grade students showed that youth living in rural areas (defined as non-metropolitan) and urban areas (metropolitan areas with a population of less than 500,000) use alcohol at similar rates.

Table 1 presents these results, comparing metro and non-metro alcohol abuse.

Table 1

Comparison of Alcohol Use in Nonmetropolitan and Metropolitan Youth,

	8 th Graders		12 th Graders	
	Nonmetro	Metro	Nonmetro	Metro
Ever tried alcohol	70.3%	71.3%	90.2%	90.2%
Ever gotten drunk	27.3%	25.7%	69.6%	69.6%
Used alcohol in last month	26.2%	28.6%	54.4%	56.6%
Gotten drunk in last month	9.1%	9.1%	35.1%	36.7%

Source: American Drug and Alcohol Survey, cited in Edwards (1994a).

Monitoring the Future (MTF) is an annual study by the University of Michigan beginning with 12th graders in 1975 and expanding to 8th, 10th, and 12th graders since 1991. MTF found that while alcohol use among all American youth still prevails over illicit drug use, reductions in alcohol use among 8th graders have occurred in the past decade. In 2002, 43,700 students in 394 schools were surveyed. Slightly less than 20% of eighth graders had consumed alcohol in the previous 30 days while 39% of the 10th graders had consumed alcohol. Self-reported ‘use in the last 30 days’ has remained steady among 12th graders (48.6%) for a decade. According to the MTF study, rates of having ‘ever been drunk’ and ‘been drunk in the past year’ decreased slightly for both 8th and 10th graders, but not for 12th graders. There has been little change among either rural or urban youth from the 1992 and 1993 ADAS studies (Johnston, O’Malley, and Bachman, 2003).

The 2001 National Household Survey on Drug Abuse (NHSDA) found that among the 75,000 respondents between the ages of 12 and 17, 21.1% in rural counties had used alcohol in the past

30 days compared to 16.4% of young people residing in large metropolitan areas. Rates for the same age group were much lower for heavy alcohol use: 4.1% for youth in rural counties and 2.1% for youth in metropolitan areas, however, both categories show higher alcohol use in rural counties.

Table 2

Alcohol Usage By Rural and Metropolitan Youth Aged 12-17, 2002

	Rural	Metropolitan
Used alcohol in last month	21.1%	16.4%
Heavy alcohol use	4.1%	2.1%

Source: National Household Survey on Drug Abuse, 2001.

Rural youth experience more problems from alcohol use. Since frontier areas and small towns provide fewer venues for recreation and distances between destinations are greater than in urban and suburban areas, rural youth are more likely to drink and drive, or drink while driving, and to experience the consequences of these behaviors (Edwards, 1997).

According to the 2002 Monitoring the Future study, illicit drug use, especially marijuana, club drugs like ecstasy, cigarette and alcohol, use among 8th, 10th, and 12th graders has remained steady or has decreased in the past six years. [Note: Ecstasy, chemical name: 3-4 methylenedioxymethamphetamine, a psychoactive drug with both stimulant and hallucinogenic properties, is also referred to by its initials, MDMA.]

However, the 2000 CASA study that analyzed 1999 data from the MTF study found that rural teens use alcohol, tobacco, and other drugs more often than urban teens. Califano notes, “Substance abuse and addiction is public enemy number one in America. Its threat to teens and young people is aggravated in small and mid-size towns, cities, and counties that lack the resources and experience available to large metropolitan concentrations to combat this problem” (CASA, 2000, p. iii). The study found that when rural 8th graders were compared to urban 8th graders, they were:

- 104% more likely to use amphetamines
- 83% more likely to use crack
- 50% more likely to use cocaine
- 34% more likely to use marijuana
- 29% more likely to drink alcohol
- 70% more likely to have been drunk
- 200% more likely to smoke cigarettes
- 500% more likely to use smokeless tobacco.

The same study showed that rural 10th graders exceeded their urban counterparts in the use of every drug except MDMA and marijuana, while rural 12th graders used cocaine, crack,

amphetamines, inhalants, alcohol, cigarettes, and smokeless tobacco more often than urban 12th graders.

Data from the 2001 National Household Survey on Drug Abuse supports the majority of other research in this area. The survey found that while overall rates of illicit drug use were lower in counties that were completely rural, youth in these counties had higher rates of use (14.4%) than youth in less urbanized nonmetropolitan counties (10.4%) and large metropolitan areas (10.4%) (Almanac of Policy Issues, 2002).

A comparative analysis of data from ADAS studies and the Prevention Planning Survey (PPS, study dates unknown) of 7th, 8th, 11th, and 12th grade rural students in nine rural communities with populations ranging from 451 to 18,400, showed that youth who live in settings ranging from frontier areas to small cities appear to be equally impacted by alcohol and other drug use. (Oetting, Edwards, Kelly, and Beauvais, 1997) According to the two surveys, youth with more risk factors were more likely to use drugs. Risk factors such as family conflict and the belief that families did not care correlated positively with increased drug use for both rural and small city youth. Poor adjustment to school, having friends who use drugs, being a female who suffers from depression, and being angry or seeking excitement also correlated with increased drug use in these surveys.

A related concern in frontier areas, which contain most Indian reservations and trust lands and have large populations of American Indians and Alaska Natives (AI/AN), is the high prevalence of alcohol and other illicit drug use among AI/AN youth. Almost one in four (23%) AI/AN teens from 12 to 17 years of age were documented to have used illicit drugs, the highest rate of any racial or ethnic group (Almanac of Policy Issues, 2002).

When it comes to using drugs on a regular basis, the percentage of youth who are considered heavy drug users is small but consistent across location (Conger, 1997). Further, the co-occurrence of illicit drug use with cigarette smoking and heavy use of alcohol has been established. Youth who smoke cigarettes are nine times as likely to use illicit drugs (48.0%) as those who do not smoke (5.3%), while those who drink heavily are 13 times as likely to use illicit drugs (65.3%) as those who do not (5.1%) (Almanac of Policy Issues, 2002). The young people that are heavy drug users are profoundly impacted by their addictions and need a high level of intervention to address the problem.

Methamphetamine Use - During the 1990s, illicit drug activity increased in rural areas. Cities with fewer than 10,000 residents experienced the largest proportional increase in drug law violations, more than six times that of larger cities. One of the largest concerns is the shocking increase of home-based methamphetamine labs (meth for short, also known as “crank”). In addition to the drug use, meth labs also endanger public safety from the use of volatile and explosive chemicals needed to make the drug. According to Drug Enforcement Administration (DEA) records, in the four-year period from 1994-1998, seizures of meth labs grew six-fold from 263 to 1,627.

Much of the methamphetamine production has become centered in sparsely populated areas of the West and Midwest. According to state and local police records, in 1998 alone, 4,132 illegal

drugs lab, mostly meth were seized. The largest number of DEA seizures in 1998 were in seven West and Midwest states, each of which experienced the seizure of at least 50 meth labs. In 1998, the DEA seized 420 meth labs in four states with large frontier populations.

Table 3

**Drug Enforcement Agency (DEA) Seizure of Meth Labs:
States with Large Frontier Areas**

STATE	Number of Lab Seizures
Arizona	228
Colorado	52
New Mexico	29
Utah	111

Source: Center on Addiction and Substance Abuse (CASA), 2000).

Secretary Califano has proposed that if [a Presidential] Administration is requesting a Congressional appropriation of \$1.6 billion to fight drug operations in Colombia, then the administration and Congress:

“should match dollar for dollar aid to Colombia with aid to the rural communities and small and mid-size cities to battle substance abuse on our own soil The need is particularly urgent with respect to methamphetamine. Meth addiction is one of the greatest threats to families in the West and Midwest, stealing parents from their children and children from their parents” (CASA, 2000, p.iii).

CASA has found that rural 8th graders are 59%, rural 10th graders are 37% , and rural 12th graders are 60% more likely to have used the drug at higher rates than their urban counterparts.

Weapon Carrying

Weapons are linked to the high homicide and suicide rates among youth in the United States. Data from the Youth Risk Behavior Surveillance (YRBS) surveys note that “nearly all of the increase in the number of murdered juveniles during the early 1990s can be accounted for by an increase in firearm-related homicides involving victims between 12 and 17 years of age” (Coggeshall and Kingery, 1999, p. 2).

Young people in the United States have no trouble obtaining weapons. Fifty percent of male 10th and 11th grade respondents to a nationwide survey indicated they would have “little” or “no trouble” obtaining a firearm (United States Department of Justice, 1998).

Youth who carry weapons are more likely to have previous violent experiences. YRBS data shows that youth who had experienced aggravated assault at school, had skipped school out of fear of being attacked while there, or had used alcohol or marijuana at school, were more likely to carry a gun at any time, bring a gun or other weapons to school, and engage in physical fights while at school. Those who had attempted suicide or used cigarettes at school were moderately

likely to engage in such behaviors. Rural white males (19.1%) reported carrying weapons onto school property, the highest percentage of any racial group.

Because gun carrying is more acceptable in rural and frontier areas, rural youth may have a weapon in their vehicle without intending to bring it into the school building. Although more rural males may be carrying weapons, the relationship between possessing a weapon and fighting remains stronger for urban males (Coggeshall and Kingery, 1999).

Outcomes of Sexual Activity

Teens in rural areas self-report being sexually active as often as their urban counterparts. Rural females under the age of 17 have similar pregnancy rates to those of urban teen females. Rural females in their late teens, 18 and 19 years old, become pregnant 39% to 40% more often than urban females of the same ages. Fewer health services of all types, and less access to reproductive health care including family planning, is much less available to most frontier and rural teens. Because abortion rates are lower in rural areas, rural teen girls who become pregnant are more likely to give birth, resulting in higher teen birth rates than urban areas (Mulder et al., 2000).

Peter House reported in an issue of *Rural Health News* that sexual activity and sexually transmitted diseases (STD) are a concern for all young people. House presented information about a high school in Seattle, Washington, which piloted a voluntary STD education program that could also be effective in rural areas. The program centers on a one-day “simulation exercise” in which students are able to experience the long-term health effects of both safe and unsafe sex. Students were assigned to one of four roles: (1) abstainers, (2) active with a single partner, (3) active with multiple partners, or (4) correct/incorrect use of condoms. The numbers assigned to each group reflected their home county “population norms.” Students were also assigned a specific STD, including herpes, Chlamydia, or HIV at the rates present in their county.

During the simulation exercise, each class period represents two years, so that by the end of the day, 12 to 14 years have passed. At the end of each period, the health status of some of the students with STDs will have changed while others may have contracted a new disease. As one student noted, “At the beginning of the day, there was not much disease. It was just amazing to see how many students became HIV positive during the day. I think it made the risks seem more real than some ‘just say’ warnings.” The goal of the model, according to Yarrow Durbin, the educational consultant who conceived the idea, is to “[drive] the point home to a group [of young people] that tends to think ‘it will never happen to me’” (House, n.d.).

Violent Behavior and Victimization

In a study that compared youth violence, drug use, and gang involvement in three western communities, Edwards (1994b) states, “...living in a nonurban community does not appear to offer much protection from violence” (p. 2). Regardless of degree of drug involvement (low, moderate, or high), rural youth reported the highest rates of being beaten up when compared to youth in the small city or the urban area studied. Youth gang members were more likely to have moderate or heavy drug involvement and to perpetrate violence and be victimized by violence.

Challenges faced by students that are perpetrators or victims of youth violence need to be solved through community planning involving parents, teachers, other community agencies and businesses. For example, small schools are the most unable to hire a school counselor with the training and skills to evaluate and help students who are struggling with issues like rape, addictions, grief, or anger. In addition to the lack of resources at small schools, the communities also lack mental health services and programs.

Frontier families often travel two to four hours to reach the nearest adolescent mental health services. Because of state budget limitations, many rural communities will need to examine creative ways to redirect community funds to assist with solving the “violence problem” that exists in nearly every community.

Sexual Assault - Violence and sexual assaults affect rural and frontier youth. A 1998 survey of over 80,000 Minnesota youth found that one in ten girls and one in twenty boys in the 9th and 12th grades had experienced violence and/or rape on a date (American Psychological Association (APA), 1998). The victims reported that they experienced more suicidal thoughts and/or attempts, higher rates of eating disorders, and psychological problems than those who had never experienced date violence and/or rape. The victims also reported concerns with the risk of contracting a sexually transmitted disease (STD).

Nationwide, young women are at high risk for sexual assault, with females under the age of 18 estimated to be the victims of more than half of all reported rapes. More recently, Kramer and Brosnan (2002) reported that young women living in rural areas are equally subject to family violence and sexual assault. The Wisconsin Coalition Against Sexual Assault (1997) estimates date rape to be 57% of all sexual assaults, with women between the ages of 16 to 24 experiencing four times the risk of being raped by a male they know than females in other age groups.

The effectiveness of a comprehensive legal and medical team approach to sexual assaults is well known. The need for physicians and other rural service providers to screen for violence in the lives of their rural female clients is also well known, although barriers exist. Some of these barriers are a perceived and actual lack of confidentiality; personal relationships among victims, abusers, and law enforcement officials; and a lack of specialized services. Each of these barriers increases the tendency not to report sexual and other violent assaults in rural areas (Leitenberg, 1999).

Suicide

High rates of violent deaths in frontier areas have been present from the earliest explorations of the west, and continue today. Despite the violent past, it is important to look for solutions to the current crisis.

In 1987, Greenberg, Carey, and Popper published an article that highlighted regional differences in violent deaths of white youth between 15 and 24 years of age from 1939 through 1979. Six western states had consistently high death rates from all causes, while four northeastern states had consistently low rates. The authors discovered that from 1950 through the 1970s, death rates from all causes for rural youth in Arizona, Idaho, Montana, Nevada, New Mexico, and Wyoming

were 40% higher than the national average for males and 56% higher than the national average for females. They also reported that suicide rates during this time period were twice as high in the western states as in the northeast for males and three times as high for females with tremendous variation between communities of similar size and location.

This trend continues today and affects not only adults, but youth as well, with the highest suicide rates for teens and young adults occurring in the western frontier states. Table 4 illustrates the relationship between frontier residence and suicide.

Table 4
Top Ten Frontier States and States with Highest Suicide Rates: All Ages

Largest Frontier Population	Largest Frontier Area	Highest Suicide Rate*
1. Arizona	1. Alaska	1. Alaska
2. Texas	2. Texas	2. Nevada
3. New Mexico	3. Montana	3. New Mexico
4. Minnesota	4. New Mexico	4. Montana
5. California	5. Arizona	5. Wyoming
6. Montana	6. Nevada	6. Arizona
7. Colorado	7. Wyoming	7/8. Colorado and Oregon
8. Oklahoma	8. Utah	
9. Washington	9. Colorado	9. Oklahoma
10. Wyoming	10. South Dakota	10. Utah

***Source:** Suicide Prevention Advocacy Network, 2000, www.spanusa.org/images/Usrates2000.gif

According to the National Children's Center 1999 report on suicides for youth aged 15 to 19 years old, the highest suicide rates for this age group from 1992 through 1996 were in the states of Alaska, Wyoming, Montana, South Dakota, North Dakota, New Mexico, Utah, Arizona, Nevada, Idaho, and Colorado. For young adults aged 20 to 24 years old during the same period, the Center reported that the states with the highest suicide rates were Alaska, Nevada, Wyoming, New Mexico, Montana, Arizona, Colorado, Idaho, and South Dakota (National Children's Center, 20-24 year olds, 1999).

Because of the prevalence of suicide in these states, special attention must be paid to the population groups at highest risk: male suicide attempters; females with depression; youth who abuse alcohol or other drugs; Native American youth, especially males; gay, lesbian and bisexual youth and young adults; and youth who have recently moved and/or have moved often in the past year.

Young women in western states do not follow the national pattern in which females make many suicide attempts but do not die. Sadly, young women in western and frontier communities complete suicide three times more often than women in metropolitan areas (Mulder, 2000).

Personality predispositions, and stressors, such as an unresolved conflict with family and /or friends, the death of a family member or friend, or humiliating experiences that result in a loss of

self-esteem or rejection, “weave together to form a composite picture of a youth at high risk for depression and self-destructive behavior.” Some will turn to alcohol and other drugs for help instead of people (Walker, 1986, p. 4).

Youth suicide prevention efforts are increasingly being incorporated into comprehensive health promotion programs. According to the New Mexico Department of Health (2002), the prevention of youth suicide can be aided by restricting access to firearms and lethal doses of drugs; by peer support programs for the highest risk youth; by extending prevention efforts to 20-24 year olds; by creating strong linkages between schools, health care providers and mental health services, and with youth assistance programs for runaways, drop outs, or pregnant teens. Evaluation for their effect on youth suicide of other youth interventions, especially those aimed at interpersonal violence and substance abuse prevention, is still needed.

Education, Drop Out Rates, and Future Earnings

As technology plays an increasing role in all types of employment, education at all levels, basic, vocational, and college, has become more important. Nationwide, high school dropout rates remained stable in the 1990s after decreasing slowly during the previous three decades (National Center for Education Statistics, 2001). Various studies have drawn different conclusions about dropout rates in rural areas as compared to suburban and urban areas, but most of the data gathered and analyzed on dropout rates rarely report on the differences between urban and rural schools. The Current Population Report, during the one-year period ending in October 1999, showed approximately 4.7% of all 10th, 11th, or 12th graders dropped out of high school, a rate that has stayed the same since 1997 (U.S. Census Bureau, 2001).

The Southwest Educational Development Laboratory compared a number of studies and found conflicting results. A 1992 analysis of Census data from 1987-1989 concluded that urban youth were somewhat more likely than rural youth to drop out of high school (15.3% compared to 13.4%), but that rural teens are less likely to resume their education after dropping out.

Two other studies conducted in the early 1990s found urban dropout rates to be 50% higher than those in rural areas while yet another source puts rural dropout rates at 20% as compared to 15% for urban youth. Rural communities, in part because of regional and cultural differences, have dramatically varying dropout rates, so that average rates for rural areas may have limited usefulness compared to local or school district data (Southwest Educational Development Laboratory, 2001).

After high school, educational differences between rural and urban students increase as shown below in Table 5.

Table 5

Rural and Urban Differences: College Attendance and Completion

	Rural	Urban
Attend College	23%	29%
Complete College	13%	23%

Source: National Center on Rural Justice and Crime Prevention, 1999

School District Consolidation - Schools in rural communities are sometimes assumed to be better connected to the community and to offer more individualized attention to students than urban schools. However, the trend to consolidate school districts in rural areas sometimes means that students must attend large schools that are located further away from their homes. The number of school districts in the U.S. shrank from 128,000 in 1930 to about 15,600 by the late 1990's (Renfro, 2002). Many rural students no longer enjoy the advantages of attending smaller schools in their own towns. According to the National Center for Education Statistics, rural public elementary and secondary schools accounted for 26.7% of all public schools in 2000.

Future earnings and lifetime financial wellbeing are related to level of education obtained. A recent study by the Employment Policy Foundation in Washington, DC found that higher education would lead to life time earnings of as much as three times higher. (Source is "Learn More to Earn More" from *U.25*, USAA, Spring 2003.)

PREVENTION PRINCIPLES AND STRATEGIES

Youth prevention programming has evolved from focusing on a single high-risk behavior, like substance abuse, to more comprehensive approaches that aim to increase individual protective factors and reduce the prevalence of multiple high-risk behaviors.

No single approach to prevention will work for every rural or frontier community (Hobbs, 1994). The tools of community building are needed to not only identify root problems but also to avoid making generalizations from communities that may be similar, but not the same. For community building to be effective, communities need to work together to identify their unique challenges and assets so that they can effectively use their local resources to the fullest. Equally important is the need to involve youth of all ages in the community improvement process by using experience-based education as well as identifying and recruiting outside resources to assist, collaborate, and achieve effective community results.

According to the Southwest Educational Development Laboratory (2001), the following five questions can provide a way to increase understanding about at-risk rural youth.

1. What do studies of drug and alcohol use, weapons carrying, violence, suicide, pregnancy, and dropout rates suggest about the nature of at-risk students in rural schools?
2. What does the demographic and socioeconomic status information about rural families, communities, and schools suggest?
3. What do studies about rural student characteristics and behaviors suggest?
4. What insights can be gleaned from social theory?
5. How do rural community leaders, educators, and parents perceive the at-risk problem of youth in their community?

Rural schools can reduce the risks for their students by annually reviewing school policies on drugs and alcohol, suicide and crisis intervention, violence and weapons, and attendance. Moreover, teachers and counselors at rural schools should be provided with annual in-service training to ensure that school drug, alcohol, and other risky behavior prevention strategies taught in the classroom are up-to-date and relevant to the specific student population. Community mobilization projects for local businesses, law enforcement, juvenile probation systems, media

campaigns, and after-school activities are also vital to ensuring that high-risk behaviors for rural and frontier youth are either reduced or eliminated.

Prevention principles have been identified that provide general guidelines for communities, school districts, and other entities approaching the health behavior improvement process. In the Resource Links section of this paper, a site for model programs is listed that provides contact information about more than 50 programs that provide quality materials, training, and technical assistance for implementation in communities nationwide.

Community-Based Prevention Strategies

While most prevention interventions have been school-based, sufficient evidence exists to support the need for interventions to be integrated into the community. Although community-based interventions have been found more difficult to evaluate, they are very important. Skills and attitudes promoted in school-based prevention programs are unlikely to be sufficient to create behavior change unless they are supported in the community (Farrell et al., 2001). Developing community involvement with and in support of youth can extend the impact of prevention programs (Tolan, 2000).

For example, the Black Hills Special Services Cooperative in western South Dakota is a model of public school districts spread across a large sparsely populated area of the state. This Cooperative first joined together to create services for children with severe developmental disabilities, and then expanded to services for at-risk youth. The keys to its success were leadership by people who were respected and known in the communities and attention to the individual nature and needs of each participating community (Bantam and Higbee, n.d.).

One community model: Mobile Mental Health Team, Upstate, New York - As an example of a solution to reducing barriers to mental health services in a large rural area, the Mobile Mental Health Team was founded a decade ago. The mission of the team is to serve the needs of rural people living in a 10,000 square-mile area of upstate New York, eight hours from New York City. The program helps meet the needs of other agencies for consultative and educational activities, assists in the identification of SED in children, and facilitates access to formal mental health services. Working with educators and parents, the Mobile Mental Health Team's primary focus is to "enhance the ability of child service agencies and schools to meet, within their resources, the mental health needs of children and adolescents" (Sawyer, 2000).

Family-Based Prevention Strategies

Early and ongoing interventions with families identified as high risk have proven effective in improving outcomes for children. Children who will display the most negative behaviors later in childhood and in adolescence can be identified in the early elementary grades. Therefore, it is possible to target preventive interventions towards these children and their families. Obtaining financial and human resources to provide these interventions is a challenge in any area and particularly so in frontier areas where resources are scarce, distances to services long, and the population widely scattered.

A very effective early intervention home visitation program for low-income pregnant women, nearly half (48%) of whom were teenagers, was developed in the late 1970's. Nurses made visits during the pregnancy and during the first two years of the child's life. A 15-year follow-up study showed these teens to be less likely to exhibit antisocial behavior and substance abuse.

Compared to a control group, these adolescents had run away fewer times, had less interaction with the justice system, fewer sex partners, and lower consumption of tobacco and alcohol (Olds et al., 1998). Today, home visitation programs continue in some communities, but should clearly be extended to all communities.

Children who grow up in families where violence is present between adults and/or between adults and children are at increased risk for violence later in their lives (Dahlberg and Potter, 2001). Parenting training that is delivered to families in groups, or through self-administered methods has been shown to positively improve parenting skills. In these training programs, parents learn to be more consistent, use nonviolent discipline, and become more self-confident in their ability to parent their children. Training for parents through computer programs or self-instruction manuals has been shown to be almost as effective as group-based programs, especially when supplemented by a few individual sessions with experienced practitioners (Webster-Stratton and Taylor, 2001). This finding is important for frontier communities where participation in group programs is especially difficult.

School-Based Prevention Strategies

School-based interventions to prevent high-risk behaviors hold much promise. Prevention strategies for all children make prevention universal and decreases stigma. Preschool and early elementary interventions have been proven to positively impact problem behaviors before they are severe enough to require intensive clinical treatment (Webster-Stratton and Taylor, 2001). Strategies targeted to children with identified needs are also effective because they allow the children with the most need to receive more intensive interventions (Dusenbury et al., 1997).

A literature review found several methods to increase the effectiveness of prevention programs:

- tailoring interventions to the target population, developmental stage, and cultural and ethnic makeup (Dusenbury et al., 1997);
- involving all of the senses and practicing all skills being taught (Dusenbury et al., 1997; Farrell et al., 2001; Tolan and Guerra, 1998); and
- reinforcing awareness through continued programming, or “booster” programs, across grade levels (Dusenbury et al., 1997); and
- including family, peers, media, and community in the prevention program (Dusenbury et al., 1997).

Promotion of personal and social competencies including anger management, social perspective taking, decision-making and social problem-solving skills, resisting peer pressure, active listening and effective communication are proven to reduce violence. Program content addressing prejudice, sexism, racism, and romantic relationships that teach compassion and respect are other important parts of prevention education programs (Dusenbury et al., 1997).

The overall school environment as well as individual teacher preparation are important components for effective prevention programming, but are sometimes overlooked. Teacher training, especially in interactive teaching techniques, helps ensure that the intervention will be implemented as designed. Ongoing staff development helps teachers model techniques like conflict resolution in the classroom, identify and refer high-risk students, and handle crises. Sometimes school, family, and the community do not mirror and support the lessons students receive in prevention programs. When schools teach mutual respect, problem-solving, and conflict resolution, it is important that the schools make changes to increase student safety, encourage natural supervision, and demonstrate respect for students (Dusenbury et al., 1997).

In addition to creating a climate of mutual respect, schools that have clear, fair rules tend to support prevention. The following school attributes have been shown to be helpful:

- maintenance of school discipline through effective, positive classroom and school management (Tolan and Guerra, 1998);
- refusal to tolerate aggression, specifically interpersonal violence and bullying (Dusenbury, et al., 1997);
- clear rules that prohibit violent behavior and its precursors, consequences for breaking those rules, and equitable implementation of the rules (Dusenbury et al., 1997);
- effective monitoring of high risk students (Tolan and Guerra, 1998);
- policies that are positive, communicate respect for students, and are not unduly harsh or punitive (Dusenbury et al., 1997; Elliott, 1998), and
- policies that improve the predictability of rewards (Tolan and Guerra, 1998).

CONCLUSION

The challenges confronting frontier youth are cause for concern and must lead to a commitment to action. The historical interconnectedness and strong sense of community in rural areas is weakening. Increases in rural poverty and economic uncertainty, changes in social patterns and community cohesiveness are making rural youth as vulnerable as those in poverty-stricken inner cities (Conger, 1997). Small town residents increasingly travel away from their homes to work, shop, obtain health care, and find entertainment.

Life in rural areas is now as readily influenced by trends as urban areas, much of this due to the influences of the media and the Internet. Illicit drug manufacturing is on the rise everywhere and today flows easily between urban, rural and frontier communities. Rural residents provide a newly expanded market for drugs that are in oversupply in the cities (Conger, 1997). Western states and communities may have cultures that accept and promote violence (Edwards, 1994b).

In the mid-1990s, rural residents responded to a survey that the greatest threats to the future of rural areas were alcohol abuse, increased crime, increased use of illegal drugs, loss of family farms, and lack of jobs (Hobbs, 1994).

While increased risks for rural and frontier youth may be attributable to some or all of the above influences, one fact is clear: one frontier community is not like another. “Generalizations about rural areas (other than small size of towns and low population density) end with one visit to a

particular rural place. Each rural community contributes to a rural average, but none is likely to be ‘typically’ rural” (Hobbs, 1994, p. 2). This is demonstrated by the fact that some rural and frontier communities have much lower rates of adolescent drug use, school drop out, alcohol use, and other risk behaviors than others.

More research is needed to identify and better describe the factors that enable some communities to raise young people who participate in fewer high-risk behaviors. Frontier communities will offer valuable models for future research.

RECOMMENDATIONS

For policy-making to be effective at all levels of government, it is vital to determine how the at-risk youth problem is different for frontier communities than for urban and rural. Programs and policies based on what works in urban and large rural communities may not necessarily work effectively in frontier areas. Many successful urban programs will work in small communities if they have adequate resources and community involvement in making appropriate modifications.

The problems of drug and alcohol use are complex and require integrated solutions as well as coordinated services delivery. More research is needed on drug and alcohol use and abuse in frontier areas, specifically research to develop and test innovative community-based, comprehensive prevention and treatment interventions.

The persistent myth of less drug and alcohol use and high-risk related behavior in sparsely populated areas negatively affects planning and policy development for behavioral health services.

Following are some specific recommendations to improve behavioral health and reduce high-risk behavior in frontier schools and communities:

- Conduct needs assessments in frontier schools. Identify and develop viable solutions for at-risk youth, and develop action plans for providing mental health services, substance and alcohol abuse prevention, violence prevention and sexual awareness programs through schools.
- Conduct research on frontier schools as a special subset of rural, including in-migration, out-migration, economic boom-and bust cycles, and the farm crisis.
- Develop alternative educational and mental health care delivery models.
- Develop new types of after-school, social service, and community providers and facilities that best meet the needs of frontier communities.
- Create opportunities for staff and administration to learn about programs that have successfully worked in other rural and frontier schools and communities.

- Create a single point of entry or focal point to coordinate services for at-risk youth in frontier communities.
- Identify and facilitate the development of training and workshops by national organizations (whether education, mental health, or social services) appropriate for rural and frontier communities. Encourage the inclusion of these sessions at national, state, or regional meetings.
- Begin prevention and awareness programs in pre-school and the earliest grades and continue through senior year, maximizing “peer power” within frontier school communities.
- Encourage government support for prevention and awareness education. Assist and support local groups and organizations as they create family-friendly schools and communities.

RESOURCE LINKS

ALCOHOL AND DRUGS

ImpacTeen

www.impactteen.org

A site dedicated to policy research to reduce youth substance use. ImpacTeen is comprised of an interdisciplinary partnership of nationally recognized substance abuse experts with specialties in a variety of academic areas. The site provides information, news releases, related websites, and research.

Join Together Online

www.jointogether.org

Founded in 1991, Join Together is primarily funded by the Robert Wood Johnson Foundation through a grant to the Boston University School of Public Health, and is considered an Internet pioneer whose purpose is to support people working on substance abuse and gun violence issues. The organization's main focus is substance abuse and the site supports community-based efforts to reduce, prevent, and treat substance abuse while providing communities with information to develop comprehensive strategies.

National Alcohol and Drug Addiction Recovery Month

www.recoverymonth.gov

This site, an initiative of the Center for Substance Abuse Treatment at SAMHSA (Substance Abuse and Mental Health Services Administration), provides a "toolkit" for communities to tailor outreach programs that match their time and resources while incorporating community treatment and recovery services as an integral part of the public health system. The site provides 18 pages of links for federal agencies and clearinghouses, and national organizations that are dedicated to creating and sustaining a healthy American society.

National Clearinghouse for Alcohol and Drug Information (NCADI)

www.ncadi.samhsa.gov

SAMHSA maintains this site. Links are provided for youth, schools, communities, and families. The site also provides information about research, funding opportunities, regional information, and offers Webcasts on a variety of topics.

National Institute on Drug Abuse (NIDA)

www.nida.nih.gov

NIDA is part of the National Institutes of Health (NIH). NIDA provides comprehensive information on drug use and abuse for students and young adults, parents and teachers, and researchers and health professionals. The site also offers links to department announcements, recent publications, and other Websites.

Partnership for a Drug-Free America (PDFA)

www.drugfreeamerica.org

PDFA is a non-profit coalition of professionals from the communications industry working at both national and local levels. The organization exists to help kids and teens reject substance abuse by influencing attitudes through persuasive information and advertising. PDFA provides at no cost guidance, on-site technical assistance, and creative materials to state and city governments, as well as drug prevention organizations, to shape anti-substance abuse media campaigns tailored to the needs of a specific community. The organization also provides assistance in finding local partnership affiliates to initiate effective programs.

MODEL PROGRAMS

Model Programs: Substance Abuse and Mental Health Services Administration (SAMHSA)

www.modelprograms.samhsa.gov

This site provides contact and cost information on more than 50 Model Programs that have been reviewed by the National Registry of Effective Programs and have received a score of at least 4.0 on a 5-point scale on Integrity and Utility. Program developers have coordinated and agreed with SAMHSA to provide quality materials, training, and technical assistance for nationwide implementation. Additionally, the site provides links to a multitude of Websites on alcohol, tobacco, illegal drugs, violence, health promotion, funding resources, and many other related topics.

SCHOOL HEALTH EDUCATORS

Resources for School Health Educators

www.drugs.indiana.edu

Though this site is a statewide clearinghouse for prevention technical assistance and information about alcohol, tobacco, and other drugs for the State of Indiana, it provides 7 pages of links that educators can use to access federal and national agencies and organizations dedicated to alcohol and substance abuse prevention and general health information.

SUICIDE

Suicide Prevention Action network USA (SPANUSA)

www.spanusa.org

Representing grassroots people in local communities, SPANUSA is dedicated to the creation and implementation of effective national suicide prevention strategies. The site provides links to crisis line telephone numbers and a Resources List.

National Institute of Mental health

www.nimh.nih.gov

This website for this federal agency offers information about suicide and its prevention for the public, health practitioners, and researchers.

TOBACCO

Campaign for Tobacco-Free Kids

www.tobacco-freekids.org

The Campaign is one of the largest non-governmental initiatives to protect children from tobacco addiction and exposure to secondhand smoke. The primary goals are to alter the public's acceptance of tobacco in our society; to influence and change public policies at the federal, state, and local levels; and to increase the number of organizations and individuals fighting against tobacco use. Currently, the organization has more than 130 partners that include health, education, medical practitioners, and civic, corporate, youth, and religious organizations. The site provides links for federal, state, and global initiatives as well as links to special reports, research, facts, and how to take action.

VICTIMIZATION

Victim Assistance Online

www.vaonline.org

Victim Assistance Online Resources is a non-profit organization dedicated to serving the world/victim assistance/victimology community. The site seeks to provide victim assistance organizations, service providers, and professionals in related fields with an online, central

directory of information and education resources. The site provides visitors with a variety of Internet communication tools that promote the free exchange and sharing of new ideas, learned experiences, and peer support between both organizations and individuals. The site also provides links to a variety of support groups for individuals and communities.

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APPENDIX A

**Estimates of Children and Adolescents
With Serious Emotional Disturbance by State, 1995**

State	Number of youth 9-17	Percent in poverty	LOF**=50		LOF**=60	
			Lower limit	Upper limit	Lower limit	Upper limit
Total.....	33,706,204	2,118,269	2,792,391	3,466,516	4,140,636
1 New Hampshire..	147,695	4.07	7,385	10,339	13,293	16,246
2 Alaska.....	90,955	8.96	4,548	6,367	8,186	10,005
3 New Jersey.....	932,671	9.60	46,634	65,287	83,940	102,594
4 Utah.....	349,086	9.76	17,454	24,436	31,418	38,399
5 Minnesota.....	643,892	11.30	32,195	45,072	57,950	70,828
6 Colorado.....	491,930	11.34	24,597	34,435	44,274	54,112
7 Nebraska.....	231,037	11.62	11,552	16,173	20,793	25,414
8 Missouri.....	709,439	11.74	35,472	49,661	63,850	78,038
9 Kansas.....	354,722	12.55	17,736	24,831	31,925	39,019
10 Wisconsin.....	706,004	12.56	35,300	49,420	63,540	77,660
11 Hawaii.....	143,901	13.97	7,195	10,073	12,951	15,829
12 North Dakota..	91,443	14.13	4,572	6,401	8,230	10,059
13 Virginia.....	790,359	14.38	39,518	55,325	71,132	86,939
14 Nevada.....	186,695	14.41	9,335	13,069	16,803	20,536
15 Indiana.....	758,633	15.24	37,932	53,104	68,277	83,450
16 Rhode Island..	115,176	15.36	5,759	8,062	10,366	12,669
17 Delaware.....	85,396	15.56	4,270	5,978	7,686	9,394
18 Maine.....	160,434	15.57	8,022	11,230	14,439	17,648
19 Vermont.....	76,500	15.79	4,590	6,120	7,650	9,180
20 Maryland.....	608,209	15.80	36,493	48,657	60,821	72,985
21 Wyoming.....	75,106	16.21	4,506	6,008	7,511	9,013
22 Georgia.....	942,161	16.30	56,530	75,373	94,216	113,059
23 Massachusetts..	680,101	17.12	40,806	54,408	68,010	81,612
24 Iowa.....	385,583	17.39	23,135	30,847	38,558	46,270
25 Washington.....	714,567	17.81	42,874	57,165	71,457	85,748
26 Connecticut....	378,473	18.03	22,708	30,278	37,847	45,417
27 Pennsylvania...	1,462,731	18.07	87,764	117,018	146,273	175,528
28 Oregon.....	411,543	18.22	24,693	32,923	41,154	49,385
29 Michigan.....	1,275,452	18.36	76,527	102,036	127,545	153,054
30 Ohio.....	1,451,220	19.33	87,073	116,098	145,122	174,146
31 Idaho.....	183,829	20.57	11,030	14,706	18,383	22,059
32 South Dakota..	108,855	20.74	6,531	8,708	10,886	13,063
33 North Carolina.	879,091	21.06	52,745	70,327	87,909	105,491
34 Kentucky.....	504,373	21.25	30,262	40,350	50,437	60,525
35 Illinois.....	1,517,182	22.14	106,203	136,546	166,890	197,234
36 Tennessee.....	658,573	22.23	46,100	59,272	72,443	85,614
37 Montana.....	126,834	22.39	8,878	11,415	13,952	16,488
38 Arkansas.....	337,718	22.44	23,640	30,395	37,149	43,903
39 Texas.....	2,623,654	24.53	183,656	236,129	288,602	341,075
40 California.....	3,968,950	24.97	277,827	357,206	436,585	515,964
41 Oklahoma.....	457,496	24.98	32,025	41,175	50,325	59,474
42 Arizona.....	542,019	25.31	37,941	48,782	59,622	70,462
43 Florida.....	1,623,697	25.50	113,659	146,133	178,607	211,081
44 New York.....	2,141,435	25.51	149,900	192,729	235,558	278,387
45 West Virginia..	231,390	26.93	16,197	20,825	25,453	30,081
46 Alabama.....	547,671	27.50	38,337	49,290	60,244	71,197
47 Louisiana.....	639,158	29.69	44,741	57,524	70,307	83,091
48 South Carolina.	470,875	32.11	32,961	42,379	51,796	61,214
49 Washington, DC.	48,365	35.33	3,386	4,353	5,320	6,287
50 New Mexico.....	251,231	36.59	17,586	22,611	27,635	32,660
51 Mississippi....	392,694	37.03	27,489	35,342	43,196	51,050

* LOF = Level of functioning from the Children's Global Assessment Scale.

SOURCE: Center for Mental Health Services, SAMHSA, HHS Federal Register, July 19, 1998.