

YouthZone

Program Evaluation Report ■ April 2011



Evaluation Technical Assistance

Healthy Youth, Strong Communities

Youth development and family services provided by YouthZone seek to motivate and equip individuals, organizations, and communities and their leaders to join together in nurturing competent, caring, and responsible children and adolescents. Helping young people means doing more than just solving an immediate problem. It means also thinking about how communities can foster positive relationships among young people, assist families and schools with resources, and create opportunities that raise expectations for a for a bright future. In towns where children and youth experience family, school, and community life as positive and where they have relationships with people who guide them, they are much more likely to learn, achieve, mature, and to reach their potential. In this sense then, every child and youth whose faltering well-being is restored is prepared to contribute to the quality of life where they live. Healthy youth make strong communities.

Life is complex and changing. Necessarily, the approaches to helping youth regain their positive sense

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of direction call for keeping up with new ideas and evaluating those that appear to be working to improve their results. This report contributes to these objectives. It suggests new ways of looking at common challenges and helps YouthZone be as accountable as possible to its funders, families, and the communities it serves.

Best Practices in Evaluating Youth Development Services

Across Colorado, each day young people are referred by schools, probation departments, courts, and social service agencies for youth services that will restore their positive development, educational achievement, and social adjustment. Intake case managers are challenged to individualize plans that will meet youth and community needs while considering client age, gender, and ethnic diversity, a wide range of family types, and referring problems of varying severity – and doing so within available resources. At YouthZone, case manager’s training and experience with planning services are supplemented by information from the *YouthZone Screening for Positive Youth Development* (YouthZone Screening).

Fig. 1 YouthZone Screening

Content

Covers a wide range of topics (assets and risk behaviors) important to case managers planning individualized services

Length

Contains 60 questions, 7 are identifying and demographic, two ask the youth to assess the quality of their Screening taking, and 51 inquire about their assets and risks.

Reading Level and Time to Complete

7th-grade, 15-minutes

The YouthZone Screening is designed to quickly and efficiently capture client risk and protective factors. Its purpose is adding information to the case manager's planning process.

It is not a behavioral health or diagnostic instrument, though the case manager may refer a client for a behavioral health evaluation in part because of information from reviewing screening.

During the past 12 years, YouthZone Screening content has changed through staff reviews during which new topics that would assist case managers with planning have been recommended. Topics have been retained or rejected after trials with new clients. Answer options have been revised through the same process. Tri-annual program evaluations of YouthZone services have analyzed the psychometric (statistical) qualities of revisions. When the screening is re-administered to youth as they complete services, comparison with their intake screening provides an empirically sound method for measuring change.

This evaluation report summarizes findings from a comparison of pre-post YouthZone Screening scores for youths who in the majority (95%) came with an admission legal problem. Full details on YouthZone Screening content, scoring, reliability, and predictive utility are available separately in Appendix A of this report. Figs. 1 and 2 describe the YouthZone Screening and its five scales. Repeated psychometric analysis with new client samples has found a small number of scales accurately capture youth responses to the 51 asset and risk questions. Thus, when a client reports a low level of marijuana use, most also report equally low levels of other drug use. These five scales reliably and validly screen clients on issues essential to supporting their personal, educational, and social development.

Fig. 2 YouthZone Screening Scales

Alcohol, Tobacco, and Other Drug Use

Measures the youth's frequency of substance use, including prescription medication, the potential harm of use, risk behaviors closely associated with extent of use (sexual activity and contact with police), and peer use of substances

Optimism and Problem Solving

Measures the youth's positive value of themselves, optimism about their future, and report of important skills for solving problems and in setting and achieving goals for their future

School and Community Involvement

Measures the youth's commitment to achieving in school, attendance, grades, and satisfaction with school, as well as their involvement in non-academic activities in school and the community

Delinquency and Aggression

Measures the youth's antisocial outlook toward rules and other people, as well as their readiness to engage in verbal and physical conflict and tolerance of use of frankly dangerous substances, e.g., huffing and using illicitly obtained medication

Self-Deprecation

Measures the youth's perception of themselves as a victim of verbal, physical, and sexual abuse, tolerance of substance use, and thoughts and plans to attempt suicide

Scoring software prints an individualized interpretation for each youth, providing best-practice recommendations to case managers on combining information from various sources for intervention. Findings have been organized into sections below.

1. Characteristics of Youth and their Communities

Between 2007 and 2010, information on 1,548 youth was collected by intake staff. This report concentrates on 679 young people whose referral and services involved a pre- and a post-administration of the YouthZone Screening, with valid results.

Study Group Demographics The 679 children and youth, the "evaluation study sample" were 39.7% female and 60.3% male. Only 9.0% were 12 years or younger and just 1.0% was 18 or older. The average age was 15.1 years. Boys and girls entered their pro-

grams at similar ages. Boys and girls were equally likely to attend public and private schools, however, younger entrants tended more often to be attending a private school.

Most clients were White American (49.2%) or Hispanic/Latino (39.9%). Among younger youth, a larger proportion was Hispanic/Latino. Boys and girls were equally likely to be born in the US, with 16.1% born in another country.

The structure of the families in which referred youth were living ranged widely, but 49.3% were living with both of their birth parents and an additional 22.3% were living with one parent and a stepparent or in joint custody with their divorced mother and father. The remainder lived in a single parent home or other arrangements. Girls and boys were equally likely to come for a home in which both of their birth parents cared for them. Detailed information about the evaluation study group characteristics can be found in Appendix B of this report.

Community of Residence Clients in the evaluation study sample came from across Garfield, Pitkin and

West Eagle Counties. A few other youths (about 2%) were residing permanently in other counties in Colorado or outside the state. As shown in Table 1, those in the immediate area were most often from Rifle, with Glenwood Springs being the second most common community of residence. Girls and boys were equally likely to come from each community. More White American and fewer Hispanic/Latino youth were living in Aspen; however, ethnicities were generally distributed in equal proportions in other towns.

Table 1 Youth Community of Residence

Community Area	Frequency	Percent	Valid Percent
Aspen Area	57	8.4	8.5
Basalt Area	56	8.2	8.4
Carbondale	91	13.4	13.6
Glenwood Springs	130	19.1	19.5
Parachute Area	44	6.5	6.6
Rifle	290	42.7	43.4
Sub Total	668	98.4	100.0
Missing	11	1.6	
Total	679	100.0	

Youths' Type of Legal Offense About 95% of youths in the evaluation study sample arrived at YouthZone with a recent legal offense. Details of the wide range of charges are revealed in Appendix B. In Table 2, these offenses have been grouped together

to assist with gaining an overview of the seriousness of youths' legal problems and to facilitate statistical analysis. In Table 2, offenses were accumulated across communities.

Table 2 Offense Seriousness

Offense Seriousness	Frequency	Percent	Valid Percent
No offense or minor offense (e.g., status offense, petty theft)	311	45.8	46.1
Drug and alcohol-related offense	262	38.6	38.9
Serious offense (Aggression or Major theft/property offense)	101	14.9	15.0
Sub Total	674	99.3	100.0
Missing	5	.7	
Total	679	100.0	

Statistical analysis found no significant difference in charges against boys and girls. Thus, overall, girls were as likely to have a serious offense on intake, as were boys. There were differences statistically

among ethnicities and offense seriousness. For example, the most serious legal problems occurred less often among Native American, Asian, and mixed ethnic youth. Hispanic/Latino boys and girls more fre-

quently were charged with the most serious legal offenses. Finally, Native American, Asian, and mixed ethnic and White American youth had more often been charged with alcohol and drug offenses.

Sources Referring Youth Youth came for services from across Garfield, Pitkin and West Eagle Counties and were referred by a long list of schools and courts. The complete list is available in Appendix B. Of all youth in the sample only 1.2% of all youth in the evaluation sample were brought to YouthZone by their parents. An additional 5% arrived at YouthZone on referral of their elementary, middle, or high school. City police departments were the source for just 0.3% of all youth. Probation Officers initiated 1.3% of all referrals. As expected, Municipal Courts (58.8%), County Courts (19.6%), and District Courts (13.5%) originated the majority of young people seen for intake.

Planning YouthZone services and funding allocation decisions rely on understanding not only the varying levels of demand for assistance in different areas of Garfield, Pitkin and West Eagle Counties, but also with appreciating the forces affecting referrals, community by community. The next evaluation task explored this issue and revealed the following key findings:

- Parents of youth were equally likely in all communities listed in Table 1 to bring their son or daughter for YouthZone services

- Generally, schools were not the primary referrer of children and youth with recent legal offenses, however, among middle school age youngsters, Rifle Middle School was most active with directing its students and in Glenwood Springs, the middle school was least likely to make these referrals
- Direct referrals from high schools were uncommon and when they occurred, they were made with equal frequency across communities
- The Aspen Municipal Court does not deal with juvenile issues, thus most juvenile offenders are seen in District Court
- County Court referrals to YouthZone came equally often from each of the communities shown in Table 1
- Youths whose residences were in Aspen or Basalt were more likely than the individuals in other communities to be referred by a Probation Officer

Most striking in these findings are the accessibility of YouthZone services across Garfield, Pitkin and West Eagle Counties, the inclusion of youth from all ethnicities and family backgrounds, and the wide significance of presenting problems case managers must be prepared to screen and plan for services.

2. YouthZone Screening and Client Characteristics

The evaluation sample was diverse regarding client community of residence, family type, and their age, gender, and ethnicity. When the YouthZone Screening is used as an intake tool, it is essential that these factors be considered in order to obtain an accurate picture for an individual. Accordingly, the program evaluation examined YouthZone Screening scores as these were affected by client characteristics. Significant findings for age, gender, and ethnicity are listed here.

Client Age and YouthZone Screening Scores For all scales at intake and discharge, younger and older youth had significantly different scores:

- Statistical analysis found that for the substance use scale, older clients reported higher scores when they were screened initially and at discharge.

- Older clients expressed more Optimism and Problem Solving ability at both screening administrations.
- Older teenagers reported lower School and Community Involvement than did younger youth.
- Reported Delinquency and Aggression tended to decline with age.
- Self-Deprecation rose among older youth.

Client Gender and YouthZone Screening Scores

In many respects boys and girls described themselves on the YouthZone Screening in similar ways – with these exceptions:

- Girls were more likely to report less favorable scores on “Optimism,” indicating more pessimism about their current circumstances and future.

- Girls were more likely to be motivated to do their best in school and become involved in their communities, as compared to boys.
- Girls were more likely to have had abusive experiences that left them with self-deprecatory feelings, than were boys.

On other YouthZone Screening-pre and post scores, there were no gender differences.

Client Ethnicity and YouthZone Screening Scores
Client ethnicity influenced screening scores in a number of ways:

- Hispanic/Latino youth were less likely to be involved in substance use, according to their screening responses, with Native American, multi-ethnic, and other ethnicities reporting the highest substance use levels

- White American youth expressed significantly higher levels of Optimism and confidence in their Problem Solving
- White youth also said they were more motivated in school and involved in their communities, reporting higher scores on School and Community Involvement than did children and teens of other ethnicities
- Native American, multi-ethnic, and youth of other ethnicities reported the highest levels of Self-Deprecation

It is apparent from these findings that in some ways, young people have a great deal in common, but in other respects, each is unique. These general trends assist the Case Manager with interpreting scores for individuals.

3. Intake-to-Discharge Changes in YouthZone Screening Scores

Not only were there age, gender, and ethnicity differences in youths' pre and post YouthZone Screening scores, these client characteristics were related also to *change* in YouthZone Screening scores from the beginning to end of services. It will assist case managers if they have an overview available that guides them in interpreting their clients' pre and post YouthZone Screening scale results.

YouthZone Screening Pre-to-Post Change and Age

- Older clients were more likely to use substances prior to their intake, and they showed more improvement in use during services
- Older clients improved less in Optimism and Problem Solving than did younger youth
- Clients who were older did increase School and Community Involvement more rapidly than younger youth; though did not improve as much in Delinquency and Aggression as did younger people
- There was a tendency, though not significant, for older clients to show a slight elevation in Self-Deprecation over time, while younger youth showed a slight improvement in this area

YouthZone Screening Pre-to-Post Change and Gender

- Girls and boys both improved equally in reducing substance use; and there was no gen-

der influence in the otherwise significant changes seen with Optimism and Problem Solving

- School and Community Involvement and Delinquency and Aggression improved for all clients and equally for groups of boys and girls
- Though no improvement was seen in Self-Deprecation when all clients were combined into one group, statistical analysis did show that girls tended to improve, while boys' concerns tended to rise, creating a significant gender relationship with change

YouthZone Screening Pre-to-Post Change and Ethnicity

Pre-to-post change on the five Screening scales appeared to be unrelated to client ethnicity, except in the case of substance use. White youth reduced their substance use during services; Latino youth showed no significant change, and multi-ethnic, Native American and other ethnicities actually increased substance use from pre-to-post.

More information from analyses of the YouthZone Screening for client characteristics in the evaluation sample can be found in Appendices A and C.

4. YouthZone Screening and Recidivism

Also assisting case managers with their intake reviews is information from the YouthZone Screening that will suggest the possibility that a child/youth is more at risk for reoffending *during services* than would be expected for clients in general.

Evaluation attempted to determine whether the YouthZone Screening could anticipate at intake, whether a client would complete their program without reoffending or get into trouble again with authorities. In this predictive study, intake screenings and re-offense data (each youth was classified as “Did not reoffend” or “Did reoffend”) were available for 916 youths. In this sample, 98 (10.7%) failed to complete their service program before reoffending. Statistical analyses found that on all five YouthZone Screening scales, reoffending youth had poorer scores than their sister and brother clients who did not reoffend.

To determine the most influential scales in predicting recidivism, additional statistics were computed. Re-

sults demonstrated that intake scores on YouthZone Screening scales of Alcohol, Tobacco, and Other Drug Use and School and Community Involvement were the best predictors of recidivism during services. The remaining three scales did not improve the prediction accuracy beyond that provided by knowledge of a youth’s substance use and their school-community involvement.

Separate statistical studies revealed that client gender (male) and family type (living with a single parent – mother or father) strengthened the YouthZone Screening’s accuracy in identifying young people who were at risk of reoffending prior to program completion. At highest risk were boys who were using substances above the average for YouthZone clients, who were not motivated in school, were uninvolved in the community, and who were living with a single parent.

These evaluation findings demonstrate the value of a reliable, valid, and cost-effective youth screening procedure.

5. YouthZone Screening for Vulnerable Youth

Experience has shown that, beyond higher risk for recidivism, some youths at intake are more vulnerable to new, emerging family, peer, and social challenges than are other young people. Evaluation looked at the utility of inspecting selected YouthZone Screening items to alert a case manager that the youth they were reviewing might require a behavioral health or other assessment – or perhaps more intensive YouthZone services.

To explore this review option, senior YouthZone staff selected the five screening items identified because these may signal a need for further action. Items were extracted from valid intake YouthZone Screenings obtained from 1,008 youths in diversion and similar YouthZone programs. Statistical analysis revealed that youth responses to the five items could be grouped into just two types, shown in Fig. 3. It was clear that veteran staff, those with supervisory responsibility, were deeply concerned about risk for suicide and that case managers be especially sensitive to youth who had experienced emotional, physical, or sexual abuse.

For each youth, evaluation summed item scores on the two risk topics in Fig. 3 to demonstrate how the

Fig. 3 YouthZone Screening

Identifying Vulnerable Youth for Formal Assessment

Suicide Risk

During the past 12 MONTHS, did you ever seriously consider suicide?

During the past 12 MONTHS, did you make a plan about how you would attempt suicide?

Abuse Risk

Has anyone ever touched you in a sexual way that you did not want?

I have been abused physically or verbally by an adult.

Have you ever had sexual contact with another person?

YouthZone Screening identifies youth who report in their answers that may need further attention and possibly clinical assessment.

About one-in-ten (10.03%) responded to the YouthZone Screening by saying that at some time in the past year, they had thoughts of suicide and had considered a plan for carrying out these thoughts. Thus, case manager intakes are assisted with screening information that will prompt immediate inquiry and possible referral for further evaluation of self-destructive feelings. In the same YouthZone sample,

about one-in-five youth (20.93%) answered questions suggesting they may have been a victim of abuse, currently or at some time in the past

The value of these risk-screening methods is further revealed through study of their relationships with other youth characteristics. Though unrelated to youths' age, girls were more likely to report information of concern about suicide and abuse. Elevated risk scores of both types were related significantly to ad-

verse scores on other YouthZone Screening scales, indicating greater Substance Use, lower Optimism and Problem Solving, less School and Community Involvement and a greater tendency to exhibit Delinquency and Aggression attitudes. Young people identified as "vulnerable" probably have multiple problems affecting their well being and development. Appendix A provides statistical details and chart data for these analyses.

6. YouthZone Screening for Post-Service Adjustment

Screening may have value also if it can alert the case manager to those young people who will do well following their discharge and those for whom a positive future is less certain. For the latter, the youth, parents and referring source may be alerted to the need for additional assistance through counselors in their school, community, or congregation or other resources such as recreation, employment or other involvement that will sustain gains made with YouthZone.

The ability of the YouthZone Screening to assist with anticipating the need for future support was determined by measured changes in court diversion clients' assets and risk factors from completion of the YouthZone Screening at the time of their *discharge* from YouthZone services and *six-months later*. In

2009, a representative sample of 100 youth clients was enrolled in a six-month follow-up study. Of these, 93 completed the post-discharge personal interview and YouthZone Screening administration. A statistical analysis found that on all YouthZone Screening scales, youth were significantly improved from the time they left YouthZone services. This improvement included a reduction in the Self-Deprecation scale that taps feelings of victimization and suicidal thinking. Two-in-three parents of these youths judged their child to be better able to avoid trouble and use good problem solving skills.

This analysis shows that the YouthZone Screening is valid for not only capturing intake-to-discharge program benefits, but will also reveal youth improvement in the months following program discharge.

7. YouthZone Program Outcomes

Below are high points of intake and discharge YouthZone Screening results from the evaluation sample, showing changes for clients in YouthZone programs. See Appendix D for details of these analyses.

Useful Public Service Among 401 participating clients, significant improvement was seen on four of the five YouthZone Screening scales. Clients showed particularly strong gains in Optimism and Problem Solving, reflecting a greater sense of optimism about their lives and more confidence in their abilities. No change in Self-Deprecation was found.

Youth Assessment Services A total of 541 clients fell into this service category. Again, all scales but for Self-Deprecation, were very much improved over time.

Individual Counseling Just 23 clients were available who had been screened and tagged as having a legal offense receiving individual counseling as part of their services. For these clients, individual counseling appeared to have very limited impact on their self-descriptions. They did report fewer attitudes and less behavior associated with the Delinquency and Aggression scale, but in other respects, they remained at the end of services much as they were at intake. Comparable data for youth that did not have an offense at intake was not available.

Drug and Alcohol Group There were 42 clients with information available on valid pre and post YouthZone Screenings and who were identified by their case managers as being members of a drug and alcohol group. These groups seemed to have little impact. There was no reduction in alcohol or other substance use, according to the youths' own reports,

nor were changes in other areas measured by the YouthZone Screening apparent.

Girls' Circle For the 54 girls in this program, significant average changes were seen primarily on the Optimism and Problem Solving scale. Participation seemed to boost their confidence in themselves and improve their outlook, but in other respects there

Fig. 4 YouthZone Programs Evaluated

- Useful Public Service
- Youth Assessment on Referral
- Family Counseling (insufficient sample for evaluation)
- Individual Youth Counseling
- Conflict Resolution (insufficient sample for evaluation)
- Drug and Alcohol Group
- Boys' Council (insufficient sample for evaluation)
- Girls Circle
- Anger Management (insufficient sample for evaluation)
- Conflict Resolution (insufficient sample for evaluation)
- Drug and Alcohol Individual Education
- Petty Theft Group (insufficient sample for evaluation)
- Restorative Justice
- Victim-Offender Mediation (insufficient sample for evaluation)

was no general influence on self-reports of adjustment.

Drug and Alcohol – Individual Education Only 25 clients were available for evaluation of this service. The effects of this program, however, were broad and quite significant, according to clients' own self-assessments. Alcohol and Drug Use scores declined markedly. In addition, there were improvements in Optimism and Problem Solving, School and Community Involvement, and Delinquency and Aggression. In contrast to the group approach to substance use problems, individual education was much more effective.

Restorative Justice In the evaluation study sample, 73 clients had participated in this program and completed valid pre and post YouthZone Screenings. Two screening scales showed statistically significant changes: Optimism and Problem Solving and Delinquency and Aggression. Delinquent attitudes and behavior declined and youths were more positive about their own futures and confident in their abilities.

Evaluation of programs using youths' own views of themselves and carefully selected samples and statistical methods assists counselors with assigning clients to services and YouthZone in program review and allocation of resources.

8. YouthZone Program Outcomes with Child-Youth Marijuana Use

The Prevalence of Marijuana Use Nationally and in Colorado Since about 2007, marijuana use by 8th-12th-graders has risen steadily nationwide. Correspondingly, youth perception at all grade levels of the risk of using and of others' potential disapproval for their using regularly has declined significantly. Perceived availability has remained unchanged, overall. These conclusions from the Monitoring the Future 2009 national Screening are corroborated by 2007 Screening information from the National Screening on Drug Use and Health. The later national study has found that In the United States, Colorado has one of the highest rates of youth marijuana use. Past month marijuana use in the state was 8.15% for youth 12-17 years, as compared to 6.67% for the country as a whole (an 18.2% higher rate of use in Colorado). Within the state, there has been a 9.5% year-over-year *increase* in youth use.

Setting aside the debate about *adult* use of marijuana, there is no credible source that approves of its use by 10-18-year olds, the YouthZone age sample. Abundant evidence from multiple studies has shown that children and young teens who are early marijuana consumers are disproportionately represented in the heavy users among older adolescents. Additionally, early use is associated with misuse of a broad range of illicit substances. For this reason, YouthZone effectiveness with early intervention is of particular interest.

In the evaluation study sample, several key findings were reached through study of client YouthZone Screening results. Details supporting these findings are available in evaluation Appendix E.

- Across age groups, 9.9% of YouthZone clients report using marijuana once a month or more often.

This is a rate 21.5% higher than for youth in Colorado and 48.4% higher than for US youth.

- YouthZone clients associate with peers who use at about the same rate as the client. Thus, a client who is a frequent/continuous user will have close peers who use at the same rate. Nonusers most typically have non-using close peers.
- Clients who use frequently are also likely to consume the most at any one time.
- Frequent/continuous use rises with age, with clients in the 11th-12th-grade using the most.
- Girls and boys in the 2007-2010 sample used marijuana at the same rates.
- Marijuana consumption in the YouthZone catchment area varies significantly by community. When communities are matched by the age of referred client. Aspen and Glenwood Springs had equal and the highest rates of use, then Carbondale, Basalt, and Rifle, with youth in the Parachute area having the lowest rates of use.
- Reported marijuana use declined statistically significantly overall for YouthZone clients from their intake to their discharge YouthZone Screenings – though client reports were not a simple, across-the-board reduction. For example:
 - Among youth who did not use or seldom used, about 15% increased their use during the time they were YouthZone clients. 85% used the same or less.
 - Among youth who were frequent/continuous users, most reduced their use while a client; however, approximately 60-75%, about two-thirds overall, continued the level of use as they left services as when they entered a YouthZone program.

- Year-over-year, nonuse has been declining and frequent or continuing use has been rising steadily and statistically significantly. The total number of youth using marijuana almost daily (about 10% of those included in this marijuana study), increased by nearly 50% during the past year of YouthZone services.
- Marijuana use by current clients who were *former clients* did not increase. One possible explanation is that their prior YouthZone program participation reduced their overall use and that thereafter their use remained stable. This possibility would not apply to the most persistent users. Among youth who had a prior involvement with YouthZone, they were more likely to be continuous users at the time of their current intake. Chronic use may persist and worsen over time, even when a youth has had access to YouthZone programs.
- Among frequent/continuous marijuana users, their legal offenses occurred more often in the illegal substance category. They were statistically less likely to commit the most serious offenses.
- Youth who did not use marijuana and whose friends did not use (and youth who used only occasionally), were significantly more likely to be involved actively in school and community activities than youth who were frequent or continuous consumers.

These program evaluation results show that YouthZone clients are much more likely to be exposed to and consume marijuana. The challenges associated with intervening with these young people is substantial, as shown by program outcomes.

9. YouthZone Program Outcomes and Case Managers

The final section of this program evaluation overview concerns a workforce development issue: What is the relative effectiveness of YouthZone case managers with improving the adjustment of their clients?

This analysis compared the clients of listed case managers in their changes from pre-to-post on the YouthZone Screening. The analysis suggests counselor effectiveness. Clients for each case manager were matched statistically according to age. Case manager clients were studied on the five YouthZone Screening scales. The methods are complex; however, major findings are reviewed in this section.

Summing the Five Screening Scales into a Total Score The YouthZone Screening scales are slightly-moderately correlated with one another because the most troubled clients tend to have multiple risk factors resulting in poorer scores on the five scales and the better adjusted have more assets so they earn more favorable scores on the scales. Each of the five scales correlates very well with a total score computed by adding together each client's five YouthZone Screening scale scores. This fact, justified combining the five scale scores for case manager analysis.

Case Manager's Client Pre-Post Change on YouthZone Screening Total Score Some case managers' caseloads had youth with higher pre levels of the as-

set/risk factors represented in the YouthZone Screening scales, however as a group, they were equally effective with building assets and reducing risks during client services. Case manager caseloads were matched for client age so that they could be considered equivalent and of similar case management difficulty. This analysis of 2007-2010 client

data shows that overall, the methods YouthZone uses to select case managers, prepare them for services, and to review their work are resulting in a highly consistent quality of youth services and comparable case manager-to-case manager performance outcomes.

YouthZone Program Evaluation Summary

This report represents findings from an external evaluation of YouthZone programs. The idea that all members of Garfield, Pitkin, and West Eagle County communities have a responsibility for and benefit from youth development programs that engage teens in trouble underlies the primary purpose of the report.

To accomplish its evaluation goal, data collection, analysis, and review have considered youth from communities across the region and methods have explored fully the unique characteristics of youth so they can be understood as individuals. YouthZone programs work in partnership with the community to deliver quality programs, accordingly, the evaluation considered all organizations referring clients. Further, the evaluation and report has been designed to support the case manager who meets a young person and their family and recommends promising solutions. It considers funders who are concerned with their investments and where additional financial assistance may be worthwhile.

Though its methods and reporting are necessarily technical so that they will align with program evaluation and reporting best practices, the report also summarizes key findings that will be of interest to all stakeholders. Some sections point to issues that will be of interest to community residents in general, other to youth and parents, to referring agencies, funders, and leaders in communities.

Finally, the evaluation design and report is intended to direct the YouthZone board and administrators toward program strengths and limitations so that together they can optimize the allocation of limited resources for maximum benefit.

Following are some of the most significant implications of the program evaluation.

Parents and Youth Trouble with the police, appearance in juvenile court, and possible probation monitoring are unexpected and highly stressful experiences for youth and parents. Parents may alter-

nate between self-blame and distress with their child. Young people may be confused, embarrassed, and fearful. Though these evaluation findings will do little to ease these emotions, parents and youth can be reassured that the quality of the support provided by YouthZone case managers and their recommendations will be unsurpassed by any other community program in Garfield, Pitkin, or West Eagle County.

The staff is experienced with a wide range of offense seriousness, from status offenses to those that are very severe. The staff is aware of individual differences among clients (e.g., boys vs. girls) and how these influence screening and program referral. Case managers are alert to young people whose restoration to a positive lifestyle is in greater jeopardy and those for whom traumatic experiences in the past are of special concern.

Evaluation has helped establish that, on average, youthful clients gain assets and reduce risk behaviors while receiving services. Not all clients make these gains and not all clients improve their adjustment in all areas. One implication of the evaluation is that youth who need additional support during and toward the end of services can be identified and available options explored with parents and their child.

Finally, the evaluation can inform parents and youth that case managers are equally effective with supporting their child toward a more adaptive future.

Communities and Referring Agencies Evaluation results show that YouthZone has made its services accessible to residents in towns across the region. Further, the evaluation provides abundant information to YouthZone staff on how it can guarantee it provides services that are culturally competent. Significantly, YouthZone administrators and program supervisors are well informed by the evaluation of program successes and limitations. Communities and agencies can have unique assurance, that youth referred to YouthZone will show a tangible benefit from participation. YouthZone screening will assist with identifying clients who are at risk of reoffending and

those who have made progress but need further assistance.

Fiscal Stakeholders Few youth serving programs in region – or across the state for that matter – are informed about their programs’ effectiveness and where modification is needed and where services are working well. Nearly all service agencies rely on a

leap of faith that what they promise, they are delivering. YouthZone, however, has adopted evaluation practices to assist in building evidence-base services and focusing administration, case managers, the organization’s board and the community on where additional attention can improve outcomes.

Acknowledgement

Evaluation recognizes current and past case managers and supervisory staff, who have contributed ideas to the design and improvement of the evaluation, and who have been dedicated to following the screening process that makes this program assessment possible.

APPENDIX A:

YouthZone Screening - Psychometric Analysis for Reliability and Validity

Individualizing Youth Services and the YouthZone Screening

Across Colorado, each day young people are referred by schools, probation departments, courts, and social agencies for youth services that will restore their positive development, educational achievement, and social adjustment. Intake case managers are challenged to individualize plans that will meet youth and community needs while considering client age, gender, and ethnic diversity, a wide range of family types, and referring problems of varying severity, and doing so within available resources. At YouthZone, case manager's training and experience with planning services are supplemented by information from the *YouthZone Screening for Positive Youth Development* (YouthZone Screening). The YouthZone Screening is designed to quickly and efficiently capture client risk and protective factors. Its purpose is adding information to the case manager's planning process. It is not a behavioral health or diagnostic assessment, though the case manager may refer a client for a behavioral health evaluation in part because of information from reviewing the screening.

Fig. 1 YouthZone Screening

Content

Covers a wide range of topics (assets and risk behaviors) important to case managers planning individualized services

Length

Contains 60 questions, 7 are identifying and demographic, two ask the youth to assess the quality of their screening taking, and 51 inquire about their assets and risks.

Reading Level

7th-grade

Time to Complete

15-minutes

During 12 years, YouthZone Screening content has changed through staff reviews during which new topics that would assist case managers with planning have been recommended. Topics have been retained or rejected after trials with new clients. Answer options have been revised through the same process. Tri-annual program evaluations of YouthZone services have analyzed the psychometric (statistical) qualities of revisions. When the screening is re-administered to youth as they complete services, comparison with their intake screening provides and empirically sound method for measuring change. This technical report summarizes findings from the most recent analysis of the YouthZone Screening scoring, reliability, and predictive utility.

Administration and Scoring

Youth complete the YouthZone Screening online at intake and again at the time of discharge, using a secure database. Two validity scales ask the youth if they have understood the questions and if they

have answered honestly. Software scores the YouthZone Screening on five scales and delivers to the youth's case manager scale results with interpretations and guidelines or recommendations for intervention.

Screening Scales

Repeated psychometric analysis of the YouthZone Screening with new client samples has found a small number of scales accurately capture youth responses to the 51 asset and risk questions. Thus, when a client reports a low level of marijuana use, most also report equally low levels of other drug use. Statistical analysis (Principal Component analysis) collects items that youths tend to answer in the same way and compiles them into a scale. Scales are named according to the included questions. The 51 YouthZone Screening items for 751 intake-screened youth are represented by five scales, shown in Fig. 2.

Screening scoring software prints an individualized interpretation for each youth, providing best-practice recommendations to case managers on combining information from various sources for intervention.

Rarely, less than 2 percent of YouthZone Screening administrations, a youth will attempt to minimize their risk behaviors to a significant degree. The printed validity score alerts the case manager to the possibility of an invalid YouthZone Screening.

Fig. 2 YouthZone Screening Scales

Alcohol, Tobacco, and Other Drug Use

Measures the youth's frequency of substance use, including prescription medication, the potential harm of use, risk behaviors closely associated with extent of use (sexual activity and contact with police), and peer use of substances ($\alpha = .869$)

Optimism and Problem Solving

Measures the youth's positive value of themselves, optimism about their future, and report of important skills for solving problems and in setting and achieving goals for their future ($\alpha = .816$)

School and Community Involvement

Measures the youth's commitment to achieving in school, attendance, grades, and satisfaction with school, as well as their involvement in non-academic activities in school and the community ($\alpha = .741$)

Delinquency and Aggression

Measures the youth's antisocial outlook toward rules and other people, as well as their readiness to engage in verbal and physical conflict and tolerance of use of frankly dangerous substances, e.g., huffing and using illicitly obtained medication ($\alpha = .701$)

Self-Deprecation

Measures the youth's perception of themselves as a victim of verbal, physical, and sexual abuse, tolerance of substance use, and thoughts and plans to attempt suicide ($\alpha = .732$)

Screening Scale Reliability

Calculation of scale reliability (Cronbach's alpha) found that internal consistency was in the acceptable range of .70 or greater. Scale reliabilities for 751 intake-screened youth are shown in the above figure.

Screening Scales and Client Characteristics

The evaluation sample of 679 youth was diverse regarding client community of residence, family type, and their age, gender, and ethnicity. When the YouthZone Screening is used as a screening tool, it is essential that these factors be considered in order to obtain an accurate intake and dis-

charge picture for an individual. The program evaluation examined YouthZone Screening responses as these were affected by client characteristics.

Table 1 shows the average scores on five intake and discharge YouthZone Screenings for youth in three age groups. For all scales at intake and discharge, younger and older youth had significantly different scores. Inspection of Table 1 indicates that for substance use, older clients reported higher scores when they were screened initially. Older clients expressed less Optimism and Problem Solving ability at intake. Their School and Community Involvement was higher. Reported Delinquency and Aggression tended to decline with age, while Self Deprecation rose among older youth. These general trends assist the Case Manager with interpreting scores for individuals.

Table 1 YouthZone Screening Scores and Client Age

YouthZone Screening Scale (*Age differences are statistically significant)	Age Group	N	Intake Screening Mean	Discharge Screening Mean
Alcohol, Tobacco, and Other Drug Use *	10-13 Years	150	17.59	17.91
	14-15 Years	210	22.31	21.09
	16-18+ Years	317	25.68	24.41
Optimism and Problem Solving *	10-13 Years	150	22.65	21.00
	14-15 Years	210	22.36	20.15
	16-18+ Years	317	20.44	19.29
School and Community Involvement *	10-13 Years	150	13.96	13.97
	14-15 Years	210	16.57	15.35
	16-18+ Years	317	15.82	14.80
Delinquency and Aggression *	10-13 Years	150	16.95	15.44
	14-15 Years	210	16.93	15.18
	16-18+ Years	317	15.56	14.55
Self Deprecation *	10-13 Years	150	8.75	8.68
	14-15 Years	210	9.39	9.31
	16-18+ Years	317	9.39	9.50

Table 2 YouthZone Screening Scores and Client Gender

YouthZone Screening Scale (*Gender differences are statistically significant)	Gender	N	Intake Screening Mean	Discharge Screening Mean
Alcohol, Tobacco, and Other Drug Use	Female	269	22.97	22.17
	Male	408	22.77	21.80
Optimism and Problem Solving *	Female	269	22.05	20.47
	Male	408	21.17	19.58

YouthZone Screening Scale (*Gender differences are statistically significant)	Gender	N	Intake Screening Mean	Discharge Screening Mean
School and Community Involvement *	Female	269	15.05	14.36
	Male	408	16.03	15.07
Delinquency and Aggression	Female	269	16.12	14.80
	Male	408	16.40	15.02
Self Deprecation *	Female	269	9.86	9.60
	Male	408	8.86	9.03

Table 3 YouthZone Screening Scores and Client Ethnicity

YouthZone Screening Scale (*Gender differences are statistically significant)	Ethnicity	N	Intake Screening Mean	Discharge Screening Mean
Alcohol, Tobacco, and Other Drug Use *	White American - Caucasian	334	24.41	22.99
	Hispanic - Latino	274	20.84	20.26
	Other ethnicities and multi-ethnic	70	22.93	23.33
Optimism and Problem Solving *	White American - Caucasian	334	20.75	19.02
	Hispanic - Latino	274	22.43	20.91
	Other ethnicities and multi-ethnic	70	21.66	20.51
School and Community Involvement *	White American - Caucasian	334	14.72	13.96
	Hispanic - Latino	274	16.80	15.79
	Other ethnicities and multi-ethnic	70	15.47	14.84
Delinquency and Aggression	White American - Caucasian	334	16.08	14.67
	Hispanic - Latino	274	16.35	15.10
	Other ethnicities and multi-ethnic	70	17.09	15.63
Self Deprecation *	White American - Caucasian	334	9.39	9.27
	Hispanic - Latino	274	8.87	8.98
	Other ethnicities and multi-ethnic	70	10.06	10.27

Screening Validity: Sensitivity to Pre-to-Post Program Intervention

Screening validity was determined through four statistical studies. First is the YouthZone Screening's capacity to reflect anticipated improvement's in youths who have participated conscientiously in YouthZone services over a specified length of time. Sensitivity to client change is essential to YouthZone Screening use in individualizing treatment plans.

For 678 youth with valid pre- and post-intervention YouthZone Screenings and who were in traditional YouthZone programs, four of five scales showed significant improvement. Client reports of substance use declined (Repeated measures ANOVA, $F_{pre-post} = 18.202$, $p < .000$). Optimism and Problem Solving gained dramatically over the intervention period ($F_{pre-post} = 117.250$, $p < .000$). Also improved were topics measured by School and Community Involvement ($F_{pre-post} = 34.311$, $p < .000$). Antisocial attitudes and actions captured in the Delinquency and Aggression scale declined also among served youth ($F_{pre-post} = 124.574$, $p < .000$). The Self-Deprecation scale, which measures client history of abuse and past substance use and suicidal concerns was, as expected, unchanged during intervention ($F_{pre-post} = .007$, $p < .934$). These analyses show that its sensitivity to changes with YouthZone programs qualifies the YouthZone Screening as a valid tool for screening new clients in consideration of their likely response to intervention.

Screening Validity: Sensitivity to Program Discharge-to-Six Months Follow-up

Screening validity was determined also by its capacity to measure changes in clients' assets and risk factors from completion of the YouthZone Screening at the time of their discharge from YouthZone services and six-months later. In 2009, a representative sample of 100 youth clients was enrolled in a six-month follow-up study. Of these, 93 completed the post-discharge review and a post-discharge YouthZone Screening administration. A repeated measures analysis of variance found that on all YouthZone Screening scales youth were significantly improved, include a reduction in the Self-Deprecation scale that taps feelings of victimization and suicidal thinking.

This analysis shows that the YouthZone Screening is valid for not only capturing intake-to-discharge program benefits, but will also reveal youth improvement in the months following program discharge.

Screening Validity—Predicting Short-term Recidivism

The third validity method determined whether the YouthZone Screening could anticipate at youth intake whether the client would complete their program without reoffending. In this validity study, intake YouthZone Screenings and re-offense data ("Did not reoffend" or "Did reoffend") were available for 916 youths. In this sample, 98 (10.7%) failed to complete their service program before reoffending. Analysis of variance found that on all five YouthZone Screening scales, reoffending youth had poorer scores than their sister and brother clients who did not reoffend. To determine the most influential scales in predicting recidivism, a Logistic Regression was computed. Results demonstrated

that intake scores on YouthZone Screening scales of Alcohol, Tobacco, and Other Drug Use and School and Community Involvement were the best statistically significant predictors of recidivism (Wald statistics = 8.949, $p < .003$ and 17.118, $p < .000$). The remaining three YouthZone Screen-

Fig. 3 YouthZone Screening

Identifying Vulnerable Youth for Formal Assessment

Suicide Risk

During the past 12 MONTHS, did you ever seriously consider suicide?

During the past 12 MONTHS, did you make a plan about how you would attempt suicide?

Abuse Risk

Has anyone ever touched you in a sexual way that you did not want?

I have been abused physically or verbally by an adult.

Have you ever had sexual contact with another person?

ing scales did not improve the prediction accuracy beyond that provided by knowledge of a youth's substance use and their school-community involvement.

Separate Logistic Regression revealed that client gender (male) and family type (living with a single parent – mother or father) strengthened the YouthZone Screening's accuracy in identifying young people who were at risk of reoffending prior to program completion.

Screening Validity: Identifying Vulnerable Youth for Formal Assessment

The fourth validity method involved the utility of inspecting selected YouthZone Screening items that could alert a case manager that the youth they were screening might require a behavioral health or other assessment. To explore this validity option, YouthZone staff selected five items identified because these may signal a need for further action. Items were extracted from valid intake YouthZone Screenings obtained from 1,008 youths in diversion and similar YouthZone programs. Principal Component analysis revealed that youth responses to the five items could be classified into just two types, shown in Fig. 3.

The charts in Fig. 4-5, created from summing item scores on the two risk topics for 1,008 youth, demonstrate how the Screening screens for youth who report in their answers that they may need further attention and possibly clinical assessment.

About one-in-ten (10.03%) responded to the YouthZone Screening by saying that at some time in the past year,

Fig. 4 Percent of Youth with Suicide Risk

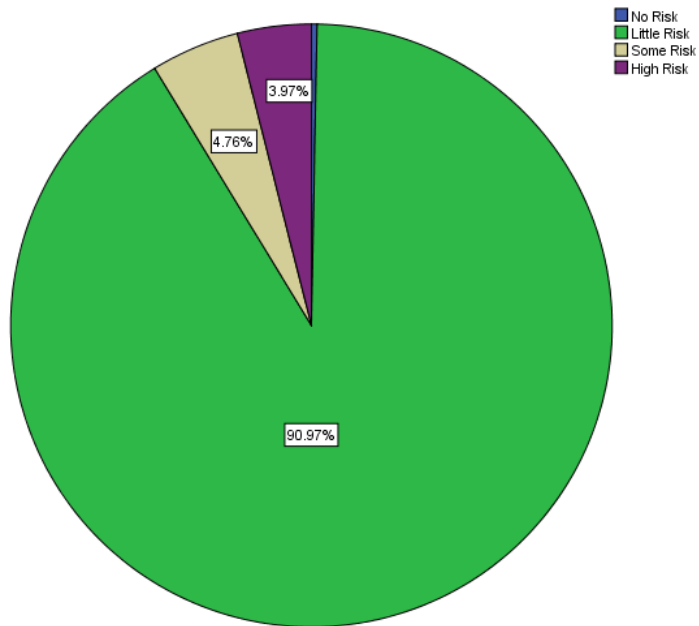
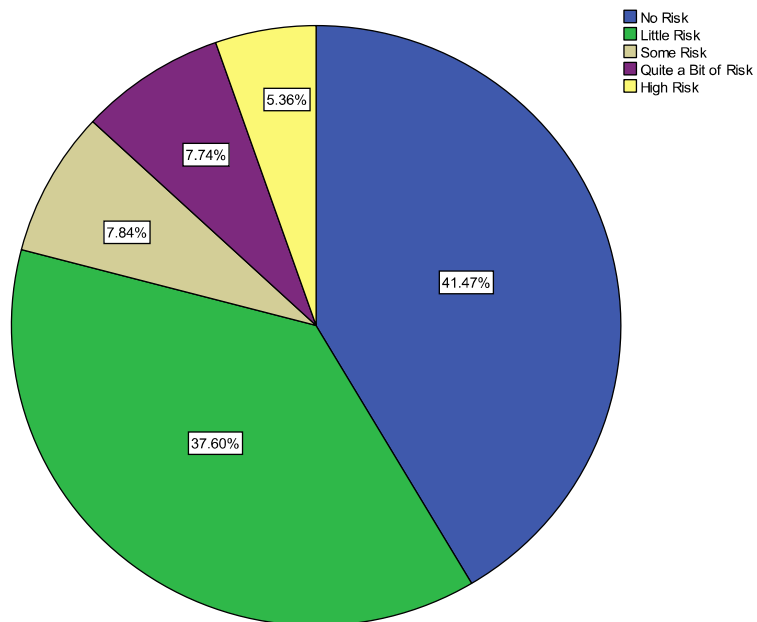


Fig. 5 Percent of Youth with Abuse Risk



they had thoughts of suicide and had considered a plan for carrying out these thoughts. Case manager intakes are assisted with the information that will prompt immediate inquiry and possible referral for further evaluation. In the same YouthZone sample, about one-in-five youth (20.93%) answered questions suggesting they may have been a victim of abuse, currently or at some time in the past.

The validity of these risk-screening methods is further revealed in their relationships with other youth characteristics. Though unrelated to youths' age, girls were more likely to report information of concern about suicide (*Chi Square* $\chi^2 = 31.834$, $p < .000$) and abuse (*Chi Square* $\chi^2 = 29.557$, $p < .000$). Elevated risk scores of both types were related significantly to adverse scores on Screening scales, indicating greater substance use, lower optimism and problem solving, less school and community involvement and a greater tendency to exhibit antisocial attitudes (all Pearson r correlations $p < .01$).

Report Glossary

Term	Definition
α	Alpha, the statistic measuring scale reliability (see Cronbach's alpha)
χ^2	Chi-square, the statistic showing the value for a comparison of data in categories, e.g. male vs. female, that cannot be averaged for an analysis of variance
ANOVA	Analysis of variance, a method of comparing the differences among mean statistics to determine if these have occurred by chance or are statistically significant – repeated measures ANOVA, measuring the same clients over time and comparing the differences to determine if a trend in repeated measures is occurring
Assets	Developmental assets are the internal strengths on which youth draw to cope with adversity and use opportunities to their advantage
Behavioral health	Health care that views most client problems as best understood by considering social, emotional, physical, and behavioral factors and integrating these in treatment
Case manager	Person trained in the planning and coordination of services for youth
Chi-square	Statistical method for determining the probability that differences among categorized measures are statistically significant
Cronbach's alpha	A statistic showing the extent to which Screening respondents answered similar question in a similar way, a measure of internal consistency (see reliability)
F	The statistic showing the value of a comparison of means from a sample
Invalid Screening	Youth respondent said they had trouble understanding the Screening items, did not answer some questions honestly, or left 10% or more of the Screening items unanswered
Logistic regression	A statistical method that determines which of a set of potential predictors of another variable have a high probability of forecasting the variable and of the potential predictors, which are most powerful
Pearson r	A statistic that shows the correlation or relationship between two sets of information

Term	Definition
	about a client
Prediction	The capacity of an instrument to forecast a client's response to intervention or their future behavior
Principal Component	Statistical analysis that uses mathematical procedures to identify groups of Screening items on which respondents give similar answers and suggest within the respondents a "factor" or stable point of view about themselves and the world
Probability	Statistical probability (e.g., $p < .05$) shows the likelihood that an identified difference has occurred by chance, or is so infrequent ($.05 = 5$ chances out of 100) that it represents a true finding
Psychometric analysis	Methods for constructing and validating measurement instruments
Reliability	The consistency of a instrument in measuring a concept, assesses the consistency of respondents in answering similar items across a Screening
Risks	Risk factors are external forces or characteristics of youth or their behavior that increase the possibility that they will experience further adversity
Sample	From a population or larger number of clients, a subset or group chosen for their common characteristics
Screening	Identifying characteristics of program participants and then filtering this information to identify issues of concern in program planning
Scale	A set of items from a Screening that have been identified (e.g., through Principal Component analysis) to measure a closely related set of client characteristics
Screening	A method for collecting quantitative information from program participants
Validity	The extent to which a measurement is well-founded and corresponds accurately to other important issues relevant to the Screening responders
Validity scales	Measurements within a Screening that show respondent bias to exaggerate or minimize answers to give a more favorable appearance of their functioning
Wald statistic	The statistic that shows the probability of an individual predictor in a logistic regression

Reference

All statistical procedures described in this report followed recommended practices in the following reference:

Brace, N. Kemp, R. and Snelgar, R. (2009) *SPSS for Psychologists, 4th Ed.* New York: Routledge

APPENDIX B: Characteristics of YouthZone Youth and their Communities

These analyses highlight demographic characteristics of served youth. Only those clients are included who had valid pre and post YouthZone Screenings and who were not Pals or SB94 clients. This selection of clients allows a fair review of client characteristics for the YouthZone Screening and other studies that include only youth with valid YouthZone Screenings.

Table 1 Youth Age

Age	Frequency	Percent	Valid Percent	Cumulative Percent
10 years	7	1.0	1.0	1.0
11 years	18	2.7	2.7	3.7
12 years	36	5.3	5.3	9.0
13 years	89	13.1	13.1	22.2
14 years	83	12.2	12.3	34.4
15 years	127	18.7	18.8	53.2
16 years	162	23.9	23.9	77.1
17 years	148	21.8	21.9	99.0
18 years or older	7	1.0	1.0	100.0
Sub Total	677	99.7	100.0	
Missing Data	2	.3		
Total	679	100.0		

Table 2 Youth Gender

Gender	Frequency	Percent	Valid Percent
Female	269	39.6	39.7
Male	408	60.1	60.3
Sub Total	677	99.7	100.0
Missing Data	2	.3	
Total	679	100.0	

- Boys and girls entered program services at similar ages

- Many evaluation analyses consider gender, as little research has been done with youth services for girls

Table 3 Type of School Attended

School	Frequency	Percent	Valid Percent
Public school	533	78.5	79.1
Private school	19	2.8	2.8
Home school	21	3.1	3.1
Alternative school	52	7.7	7.7
GET program	13	1.9	1.9
Not attending school	36	5.3	5.3
Sub Total	674	99.3	100.0
Missing Data	5	.7	
Total	679	100.0	

- Younger clients tend to be the ones who were enrolled in private school
- Boys and girls were equally likely to attend public and private schools; one of many examples of how similar boys and girls are in the evaluation study sample

Table 4 Ethnic Status

Ethnicity	Frequency	Percent	Valid Percent
African American	2	.3	.3
Asian	3	.4	.4
Hispanic/Latino	271	39.9	40.0
Multi-ethnic	36	5.3	5.3
Native American/Alaskan Native	30	4.4	4.4
Native Hawaiian/Pacific Islander	2	.3	.3
White American/Caucasian	334	49.2	49.3
Sub Total	678	99.9	100.0
Missing Data	1	.1	
Total	679	100.0	

- A significantly larger proportion of the youngest clients were Latino. Older clients tended to be Anglo or Native American.
- Clients may choose more than one ethnic group
- The small number of Native American clients prevents drawing any conclusions about them as an ethnic group in the evaluation
- Boys and girls were equally represented in all ethnic groups

Table 5 Country of Birth

Born in the US	Frequency	Percent	Valid Percent
Yes	567	83.5	83.8
No	109	16.1	16.1
I do not know	1	.1	.1
Sub Total	677	99.7	100.0
Missing Data	2	.3	
Total	679	100.0	

- Boys and girls are equally represented in, in- and out of country birth

Table 6 Language Used Most often at Home

Language at Home	Frequency	Percent	Valid Percent
English	474	69.8	70.2
Spanish	197	29.0	29.2
Another language	4	.6	.6
Sub Total	675	99.4	100.0
Missing Data	4	.6	
Total	679	100.0	

- Male YouthZone clients were more likely to come from Spanish-speaking families than were girls.

Table 7 Family Type

Family Type	Frequency	Percent	Valid Percent	Cumulative Percent
Two birth parents	334	49.2	49.3	49.3
One birth parent and step parent	113	16.6	16.7	65.9
Single parent - mother	130	19.1	19.2	85.1
Single parent - father	28	4.1	4.1	89.2
50-50 custody both birth parents	38	5.6	5.6	94.8
Grandparent(s)	13	1.9	1.9	96.8
Other (includes foster parents)	22	3.2	3.2	100.0
Sub Total	678	99.9	100.0	
Missing Data	1	.1		
Total	679	100.0		

- Girls and boys were equally likely to come from intact families (living with both birth parents)

- Most youth are living with both parents or in a home with a birth and a step parent; fewer than one-in-four are in a single parent home

Table 8 Community of Residence

Community Area	Frequency	Percent	Valid Percent	Cumulative Percent
Aspen Area	57	8.4	8.5	8.5
Basalt Area	56	8.2	8.4	16.9
Carbondale	91	13.4	13.6	30.5
Glenwood Springs	130	19.1	19.5	50.0
Parachute Area	44	6.5	6.6	56.6
Rifle	290	42.7	43.4	100.0
Sub Total	668	98.4	100.0	
Missing Data	11	1.6		
Total	679	100.0		

- Girls and boys were equally likely to come from all communities
- More Native American youth came from the Parachute area than other communities; fewer Latino youth came from the Aspen area as compared to all other community areas; and more Anglo youth came from the Aspen area than from other communities.
- Youth's family statuses were equivalent across communities; single parent families were as common in all community areas.

Table 9 Type of Legal Offense at Referral

Type of Legal Offense	Frequency	Percent	Valid Percent
No legal offense	34	5.0	5.0
Aggression against another person	96	14.1	14.2
Alcohol and drug abuse	262	38.6	38.9
Criminal mischief	54	8.0	8.0
Fraudulent conduct	6	.9	.9
Major theft, criminal acts involving property	5	.7	.7
Minor status offenses	11	1.6	1.6
Petty theft	20	2.9	3.0
Probation support	153	22.5	22.7
Traffic	33	4.9	4.9
Sub Total	674	99.3	100.0
Missing Data	5	.7	
Total	679	100.0	

Table 10 Recoded Type of Legal Offense – Seriousness of Legal Offense, if Any

Offense Seriousness	Frequency	Percent	Valid Percent
No offense or minor offense (e.g., status offense, petty theft)	311	45.8	46.1
Drug and alcohol-related offense	262	38.6	38.9
Serious offense (Aggression or Major theft/property offense)	101	14.9	15.0
Sub Total	674	99.3	100.0
Missing Data	5	.7	
Total	679	100.0	

- Recoded Type of Legal Offense was the same across community areas
- Recoded Type of Legal Offense was the same for boys and girls
- Most (45.8%) of offenses are for relatively minor infractions of the law
- Recoded Type of Legal Offense was different among ethnic groups:
 - Serious offenses were less likely to occur among Native American and Asian youth
 - Among youth with serious offenses on referral, more were likely to be Latino
 - Anglo and Native American youth were more likely to have a drug and alcohol related issue on referral than were other ethnic groups.

Table 11 Referral Source

Referral Source	Frequency	Percent	Valid Percent
Basalt High	1	.1	.1
Basalt Middle	2	.3	.3
Coal Ridge High	1	.1	.1
County Court - Glenwood	41	6.0	6.0
County Court - Pitkin	24	3.5	3.5
County Court - Rifle	66	9.7	9.7
Crystal River Elementary	1	.1	.1
District Court - Garfield	40	5.9	5.9
District Court - Pitkin	50	7.4	7.4
Glenwood High	3	.4	.4
Municipal Court - Basalt	47	6.9	6.9
Municipal Court - Carbondale	28	4.1	4.1
Municipal Court - Glenwood	133	19.6	19.6
Municipal Court - New Castle	20	2.9	2.9
Municipal Court - Parachute	19	2.8	2.8
Municipal Court - Rifle	135	19.9	19.9

Referral Source	Frequency	Percent	Valid Percent
Municipal Court - Silt	10	1.5	1.5
Parent Consultation	1	.1	.1
Probation	9	1.3	1.3
Rifle High	1	.1	.1
Rifle Middle	2	.3	.3
Riverside Middle	16	2.4	2.4
Roaring Fork High	1	.1	.1
Self/Parent	7	1.0	1.0
Unknown	12	1.8	1.8
Unknown School	8	1.2	1.2
YouthZone	1	.1	.1
Total	679	100.0	100.0

Table 12 Recoded Referral Source

Referral Source	Frequency	Percent	Valid Percent	Cumulative Percent
Self/Parent	8	1.2	1.2	1.2
Elementary school	1	.1	.1	1.3
Middle school	26	3.8	3.9	5.2
High school	7	1.0	1.0	6.3
YouthZone	1	.1	.1	6.4
City police department	2	.3	.3	6.7
Municipal court	392	57.7	58.8	65.5
County court	131	19.3	19.6	85.2
District court	90	13.3	13.5	98.7
Probation	9	1.3	1.3	100.0
Sub Total	667	98.2	100.0	
Missing Data	12	1.8		
Total	679	100.0		

Table 13 Distribution of Referral Sources by Community Area

Referral Source	City of Residence - Local communities only							Total
	Aspen Area	Basalt Area	Carbondale	Glenwood Springs	Parachute Area	Rifle		
Self/Parent	N	1	0	2	3	0	2	8
	%	1.9%	.0%	2.3%	2.4%	.0%	.7%	1.2%
Elementary school	N	0	0	0	1	0	0	1
	%	.0%	.0%	.0%	.8%	.0%	.0%	.2%
Middle school	N	1	2	1	1	2	19	26
	%	1.9%	3.6%	1.2%	.8%	4.5%	6.6%	4.0%
High school	N	0	0	3	2	0	2	7
	%	.0%	.0%	3.5%	1.6%	.0%	.7%	1.1%
YouthZone	N	0	0	0	0	0	1	1
	%	.0%	.0%	.0%	.0%	.0%	.3%	.2%
City police department	N	0	0	0	0	0	2	2
	%	.0%	.0%	.0%	.0%	.0%	.7%	.3%
Municipal court	N	4	33	53	89	20	185	384
	%	7.4%	60.0%	61.6%	70.1%	45.5%	63.8%	58.5%
County court	N	10	10	14	24	13	60	131
	%	18.5%	18.2%	16.3%	18.9%	29.5%	20.7%	20.0%
District court	N	35	7	12	6	9	18	87
	%	64.8%	12.7%	14.0%	4.7%	20.5%	6.2%	13.3%
Probation	N	3	3	1	1	0	1	9
	%	5.6%	5.5%	1.2%	.8%	.0%	.3%	1.4%
Total	N	54	55	86	127	44	290	656
	%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

- Self/Parent referrals were equally likely to come from all community areas.
- Elementary schools did make referrals – or at least the source of their referrals was not coded at intake
- More middle school referrals originated in Rifle, than other community areas, fewer middle school referrals originated in Glenwood than in other community areas.
- Direct referrals from high schools were uncommon.
- Direct referrals from city police departments were uncommon
- Fewer municipal court referrals originated in Aspen than in other community areas.
- County court referrals came equally often across community areas.
- In Aspen and Basalt, referrals that are more direct originated with probation than in other community areas.

APPENDIX C: Pre-Post YouthZone Screening Score - Changes for All Clients

Understanding Client Changes with YouthZone Services

The evaluation study sample was composed of a diverse group of young people. They came from communities with different local cultures, were male and female, had different family types, and were of varying ages and ethnicities. It will assist case managers if they have an overview available that guides them in interpreting their clients' pre and post YouthZone Screening scale results. In table 1, all pre-post changes were statistically significant. Significant changes related to client age, gender, and ethnicities are described.

Table 1 Pre-Post YouthZone Screening Score Changes by Client Characteristics

YouthZone Screening Scale	Client Age	Client Gender	Client Ethnicity
Alcohol, Tobacco, and Other Drug Use	<ul style="list-style-type: none"> The youngest clients, who reported little substance use at intake, did not change their use during YouthZone services, while older clients report significant improvement 	<ul style="list-style-type: none"> Boys and girls both showed improvement in their substance use during YouthZone services, and there was no difference in their pre-post changes 	<ul style="list-style-type: none"> White youth reduced their substance use during services, Latino youth showed no significant change and multi-ethnic, Native American and other ethnicities actually increase substance use from pre-to-post
Optimism and Problem Solving	<ul style="list-style-type: none"> As a group, all youth improved in this area, however, change was significantly less for older clients 	<ul style="list-style-type: none"> Client gender was not a factor in Optimism and Problem Solving change from pre-to-post 	<ul style="list-style-type: none"> Client ethnicity did not influence improvement in Optimism and Problem Solving – all clients showed significant gains
School and Community Involvement	<ul style="list-style-type: none"> As a group, all youth improved in their School and Community Involvement, however, change was significantly less for the youngest clients 	<ul style="list-style-type: none"> Improvement with services was unrelated to client gender; both boys and girls showed similar positive changes in their involvement 	<ul style="list-style-type: none"> Though they began at different levels, clients of all ethnicities showed similar, positive changes on this score
Delinquency and Aggression	<ul style="list-style-type: none"> All clients showed improvement in Delinquency and Aggression, however, changes were much smaller for older YouthZone clients during services 	<ul style="list-style-type: none"> Boys and girls improved in equal degrees in Delinquency and Aggression 	<ul style="list-style-type: none"> Clients as a group showed lower scores on Delinquency and Aggression; and changes were equivalent for all ethnicities
Self Deprecation	<ul style="list-style-type: none"> When all clients in the evaluation study group were compared pre-to-post there were no statistically significant differences on this scale; however, there was a tendency for older clients to show a slight elevation in concern, as compared to younger youth 	<ul style="list-style-type: none"> Though no improvement was seen in Self-Deprecation when all clients were combined into one group, statistical analysis showed that girls tended to improve, while boys' concerns tended to rise, creating a significant gender relationship with change 	<ul style="list-style-type: none"> Youth ethnicity was not a factor in pre-to-post scores on Self-Deprecation

APPENDIX D: YouthZone Programs: Participants' Pre-Post Screening Changes

Major Findings from the YouthZone 2007-2010 Program Evaluation

This analysis reports changes in the YouthZone Screening from pre to post among youth participating in the following programs.

Table 1 Useful Public Service

(Number clients = 401)

YouthZone Screening Scale	Client Pre-Post Screening Change	Statistics
Alcohol and Other Drug Use	Participating clients showed very significant improvement on this scale	$F = 18.32, p < .000$
Optimism and Problem Solving	Participating clients showed very significant improvement on this scale	$F = 70.28, p < .000$
School and Community Involvement	Participating clients showed very significant improvement on this scale	$F = 21.23, p < .000$
Delinquency and Aggression	Participating clients showed very significant improvement on this scale	$F = 18.32, p < .000$
Self-Deprecation	Participating clients showed no significant improvement on this scale	$F = 0.027, p < .868$
Total Screening Score	Participating clients showed very significant improvement on this scale	$F = 76.32, p < .000$

- Statistics with probabilities $< .01$ are highly significant, showing meaningful pre-post change

Table 2 Assessment

(Number of clients = 541)

YouthZone Screening Scale	Client Pre-Post Screening Change	Statistics
Alcohol and Other Drug Use	Participating clients showed very significant improvement on this scale	$F = 14.37, p < .000$
Optimism and Problem Solving	Participating clients showed very significant improvement on this scale	$F = 99.15, p < .000$
School and Community Involvement	Participating clients showed very significant improvement on this scale	$F = 22.11, p < .000$
Delinquency and Aggression	Participating clients showed very significant improvement on this scale	$F = 94.76, p < .000$
Self-Deprecation	Participating clients showed no significant improvement on this scale	$F = 0.589, p < .443$
Total Screening Score	Participating clients showed very significant improvement on this scale	$F = 84.55, p < .000$

- Statistics with probabilities $> .01$ are not significant, showing no pre-post change

Family Counseling (Insufficient cases for analysis)

Table 3 Counseling-Individual for Youth with Legal Offenses

(Number of clients = 23)

YouthZone Screening Scale	Client Pre-Post Screening Change	Statistics
Alcohol and Other Drug Use	Participating clients showed no significant improvement on this scale	$F = 0.693, p < .414$
Optimism and Problem Solving	Participating clients showed no significant improvement on this scale	$F = 1.979, p < .173$
School and Community Involvement	Participating clients showed no significant improvement on this scale	$F = 1.778, p < .196$
Delinquency and Aggression	Participating clients showed significant improvement on this scale	$F = 5.999, p < .023$
Self-Deprecation	Participating clients showed no significant improvement on this scale	$F = 1.398, p < .250$
Total Screening Score	Participating clients showed a slight tendency toward improvement on this scale, based mostly on reduced delinquency and abuse-related trauma	$F = 2.857, p < .105$

County Court Non-Traffic (Insufficient cases for analysis)

Table 4 District Court-Diversion

(Number of clients = 69)

YouthZone Screening Scale	Client Pre-Post Screening Change	Statistics
Alcohol and Other Drug Use	Participating clients showed very significant improvement on this scale	$F = 10.84, p < .002$
Optimism and Problem Solving	Participating clients showed very significant improvement on this scale	$F = 18.45, p < .000$
School and Community Involvement	Participating clients showed no significant improvement on this scale	$F = 2.012, p < .161$
Delinquency and Aggression	Participating clients showed very significant improvement on this scale	$F = 42.76, p < .000$
Self-Deprecation	Participating clients showed a slight tendency toward improvement on this scale	$F = 3.566, p < .063$
Total Screening Score	Participating clients showed very significant overall improvement on the YouthZone Screening	$F = 24.98, p < .000$

Conflict Resolution-Group (Insufficient cases for analysis)

Table 5 Drug and Alcohol-Group

(Number of clients = 42)

YouthZone Screening Scale	Client Pre-Post Screening Change	Statistics
Alcohol and Other Drug Use	Participating clients showed no significant improvement on this scale	$F = 0.946, p < .337$
Optimism and Problem Solving	Participating clients showed no significant improvement on this scale	$F = 0.026, p < .872$
School and Community Involvement	Participating clients showed no significant improvement on this scale	$F = 1.115, p < .297$
Delinquency and Aggression	Participating clients showed no significant improvement on this scale	$F = 0.436, p < .513$
Self-Deprecation	Participating clients showed no significant improvement on this scale	$F = 0.260, p < .613$
Total Screening Score	Participating clients showed no improvement on the YouthZone Screening scales	$F = 0.863, p < .358$

Boys Council (Insufficient cases for analysis)

Table 6 Girls Circle

(Number of clients = 54)

YouthZone Screening Scale	Client Pre-Post Screening Change	Statistics
Alcohol and Other Drug Use	Participating clients showed no significant improvement on this scale	$F = 2.687, p < .107$
Optimism and Problem Solving	Participating clients showed very significant improvement on this scale	$F = 9.279, p < .004$
School and Community Involvement	Participating clients showed no significant improvement on this scale	$F = 1.453, p < .233$
Delinquency and Aggression	Participating clients showed no significant improvement on this scale	$F = 1.810, p < .184$
Self-Deprecation	Participating clients showed no significant improvement on this scale	$F = 0.007, p < .932$
Total Screening Score	Participating clients showed no overall improvement on the YouthZone Screening scales	$F = 0.074, p < .786$

Anger Management (Insufficient cases for analysis)

Conflict Resolution – Individual (Insufficient cases for analysis)

Table 7 Drug and Alcohol – Individual Education

(Number of clients = 25)

YouthZone Screening Scale	Client Pre-Post Screening Change	Statistics
Alcohol and Other Drug Use	Participating clients showed very significant improvement on this scale	$F = 8.892, p < .006$
Optimism and Problem Solving	Participating clients showed very significant improvement on this scale	$F = 11.31, p < .003$
School and Community Involvement	Participating clients showed significant improvement on this scale	$F = 5.314, p < .030$
Delinquency and Aggression	Participating clients showed significant improvement on this scale	$F = 6.857, p < .015$
Self-Deprecation	Participating clients showed no significant improvement on this scale	$F = 1.000, p < .327$
Total Screening Score	Participating clients showed very significant improvement overall on the YouthZone Screening scales	$F = 11.45, p < .002$

Petty Theft (Insufficient cases for analysis)

Table 8 Restorative Justice

(Number of clients = 73)

YouthZone Screening Scale	Client Pre-Post Screening Change	Statistics
Alcohol and Other Drug Use	Participating clients showed no significant improvement on this scale	$F = 0.279, p < .599$
Optimism and Problem Solving	Participating clients showed very significant improvement on this scale	$F = 14.31, p < .000$
School and Community Involvement	Participating clients showed no significant improvement on this scale	$F = 1.891, p < .173$
Delinquency and Aggression	Participating clients showed very significant improvement on this scale	$F = 46.31, p < .000$
Self-Deprecation	Participating clients showed no significant improvement on this scale	$F = 0.236, p < .629$
Total Screening Score	Participating clients showed very significant improvement overall on the YouthZone Screening scales	$F = 14.63, p < .000$

Victim-Offender Mediation (Insufficient cases for analysis)

APPENDIX E: YouthZone Program Evaluation— Marijuana Use Study

National Prevalence Data - Monitoring the Future - 2009

1. Since about 2007, marijuana use by 8th-12th-graders has risen steadily nationwide. Correspondingly, youth perception at all grade levels of the risk of using and of others' potential disapproval for their using regularly have declined significantly. Perceived availability has remained unchanged, overall.
2. In the decade prior to 2007, youth marijuana use was in gradual decline. (Alcohol use – and specifically, occasions of heavy drinking – continues a long-term decline among teens into 2010, reaching historically low levels.)

State Prevalence Data - National Screening on Drug Use and Health - 2007

1. 2007 is the last year for which national cross-state data are available for youth marijuana use.
2. Six States were equivalent for past month marijuana use in all three age groups (12 to 17, 18 to 25, and 26 or older), and among a combined group of persons 12 or older: Colorado, Maine, Montana, New Hampshire, Rhode Island, and Vermont. Iowa had the lowest rate of past month use of marijuana in 2006-2007 (3.8 percent) in the 12 or older population, and Rhode Island had the highest rate.
3. In the United States, Colorado has one of the highest rates of youth marijuana use. Past month marijuana use in the state was 8.15% for youth 12-17 years, as compared to 6.67% for the country as a whole (18.2% higher rate of use in Colorado). Within the state, there has been a 9.5% year-over-year increase in youth use.

Major Findings from the YouthZone 2007-2010 Program Evaluation

(Only youth were included in this marijuana study who had a valid pre and post Screening and were neither a Pals nor SB94 client, N=679.)

- Across age groups, 9.9% of YouthZone clients report using marijuana once a month or more often. This is a rate 21.5% higher than for youth in Colorado and 48.4% higher than for US youth.
- YouthZone clients associate with peers who use at about the same rate as the client. Thus, a client who is a frequent/continuous user will have close peers who use at the same rate. Nonusers most typically have non-using close peers.
- Clients, who use frequently, are also likely to consume the most at any one time.
- Frequent/continuous use rises with age, with clients in the 11th-12th-grade using the most.
- Girls and boys in the 2007-2010 sample used marijuana at the same rates.
- Marijuana consumption in the YouthZone catchment area varies significantly by community. When communities are matched by the age of referred client, Aspen and Glenwood

Springs had an equal and the highest rates of use, then Carbondale, Basalt and Rifle, with youth in the Parachute area having the lowest rates of use.

- Reported marijuana use declined statistically significantly overall for YouthZone clients from their intake to their discharge Screenings – though client reports were not a simple, across-the-board reduction. For example:
 - Among youth who did not use or used seldom, about 15% increased their use during the time they were YouthZone clients. 85% used the same or less.
 - Among youth who were frequent/continuous users, most reduced their use while a client, however, approximately 60-75%, about two-thirds overall, continued the level of use as they left services as when they entered a YouthZone program.
- Year-over-year, nonuse has been declining and frequent or continuing use has been rising steadily and statistically significantly. The total number of youth using marijuana almost daily (about 10% of those included in this marijuana study), increased by nearly 50% during the past year of YouthZone services.
- Marijuana use by current clients who were former clients did not increase. One possible explanation is that their prior YouthZone program participation reduced their overall use and that thereafter their use remained stable. This possibility would not apply to the most persistent users. Among youth who had a prior involvement with YouthZone, they were more likely to be continuous users at the time of their current intake. Chronic use may persist and worsen over time, even when a youth has had access to YouthZone programs.
- Among frequent/continuous marijuana users, their legal offenses occurred more often in the illegal substance category. They were statistically less likely to commit the most serious offenses.
- Youth who did not use marijuana and whose friends did not use (and youth who used occasionally), were significantly more likely to be involved actively in school and community activities than youth who were frequent or continuous consumers.

The following pages provide statistical detail for the above conclusions.

Table 1 Item Pre37. “During the past 30 DAYS, on how many days did you smoke marijuana?”

Days of Use	Frequency	Percent	Cumulative Percent
0 Days	544	80.1	80.1
1-2 Days	78	11.5	91.6
3-9 Days	30	4.4	96.0
10-19 Days	17	2.5	98.5
20-30 Days	10	1.5	100.0
Total	679	100.0	

- Most (80.1%) of YouthZone clients had not used marijuana in the previous 30-days

Fig. 1 Distribution of YouthZone Client Marijuana Use

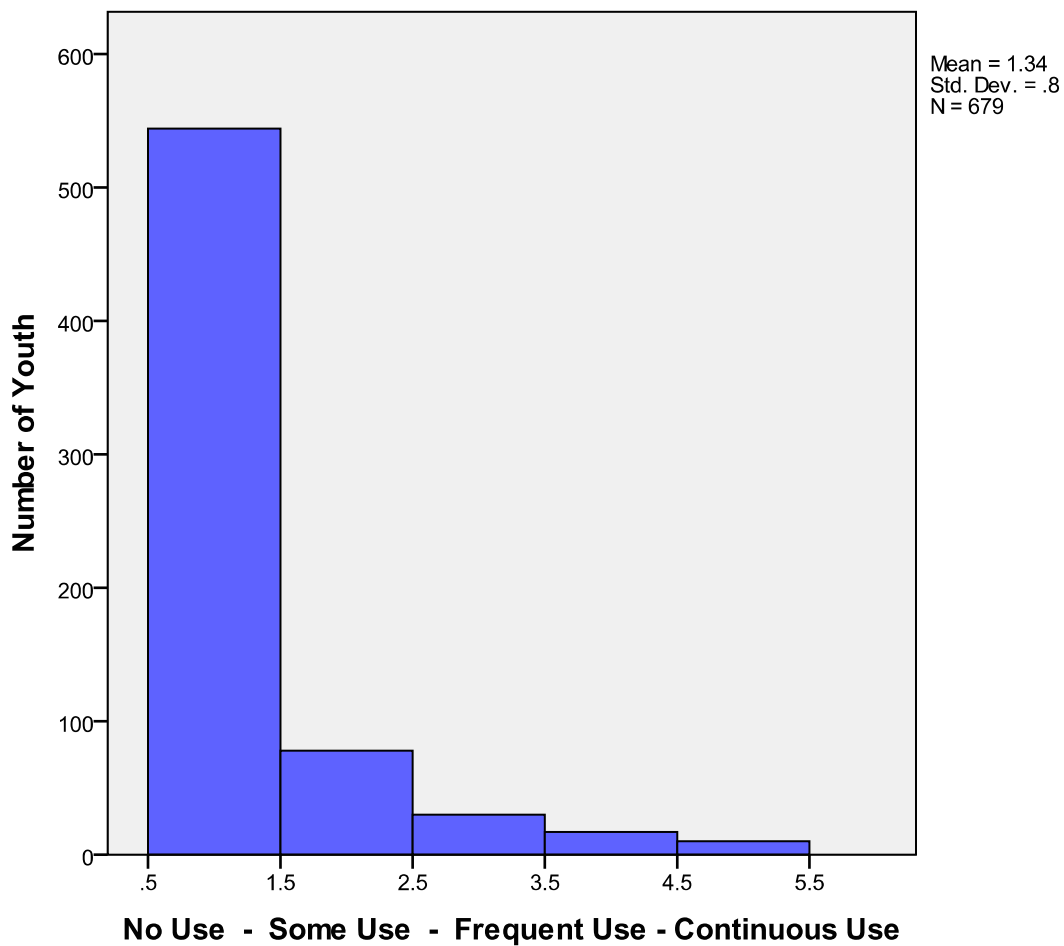
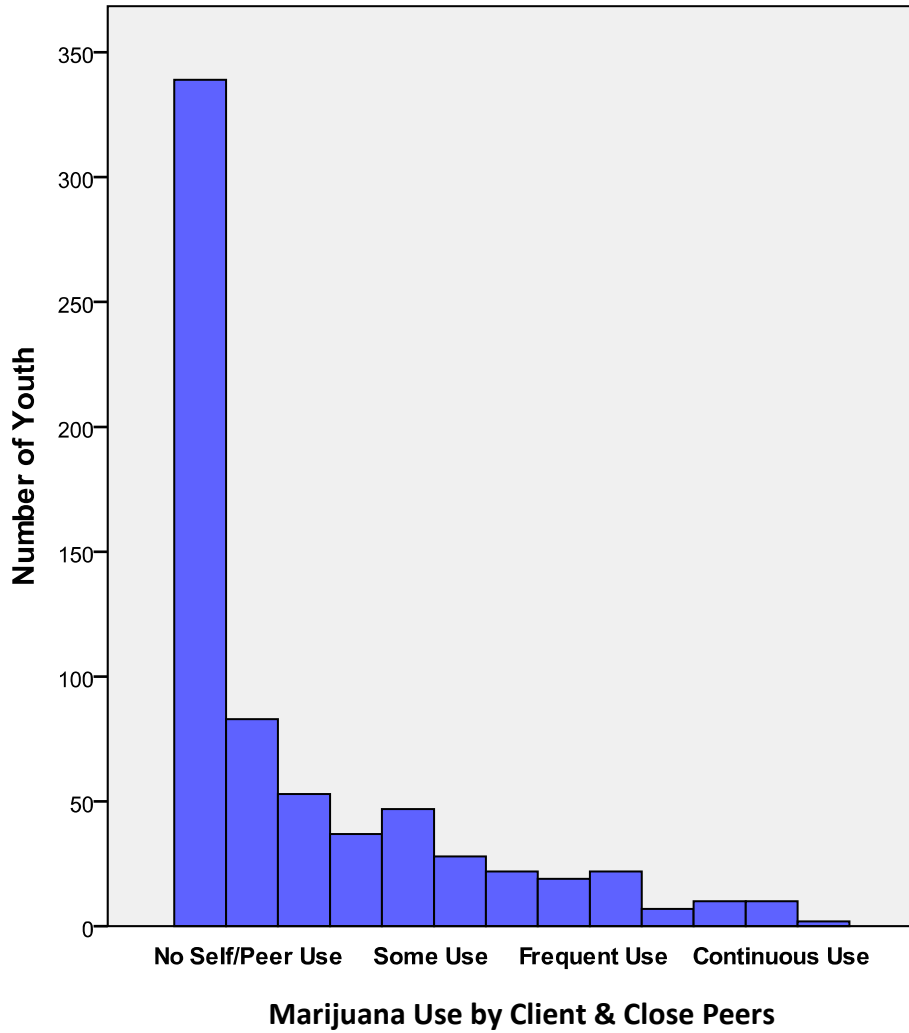


Fig. 2 Distribution of YouthZone Client-Peer Marijuana Use



- Most YouthZone clients use marijuana to an extent very similar to that of their close peers

Table 2 Extent of Self and Close Peer Use of Marijuana

Extent of Use	Number of Youth	Percent of all Youth	Cumulative Percent
No self/close peer use of marijuana	339	49.9	49.9
Some use	173	25.5	75.4
Frequent use	97	14.3	89.7
Continuous self/close peer use of marijuana	70	10.3	100.0
Total	679	100.0	

- Most YouthZone clients use marijuana to an extent very similar to that of their close peers

Table 3 Extent of Marijuana Use X Youth Age

Extent of Use	N	Mean	Std. Deviation
No self/close peer use of marijuana	337	5.53	1.879
Some use	173	6.14	1.564
Frequent use	97	6.84	1.312
Continuous self/close peer use of marijuana	70	6.79	1.102
Total	677	6.00	1.738

ANOVA					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	187.312	3	62.437	22.644	.000
Within Groups	1855.675	673	2.757		
Total	2042.987	676			

- Statistics with probabilities < .01 are highly significant, showing meaningful age difference
- YouthZone clients who use marijuana frequently, have friends who are also frequent users; the heaviest use of marijuana is by youths whose friends are also among the heaviest users

Table 4 Extent of Marijuana Use X Youth Gender

Client Gender		Marijuana Use				Total
		No self/close peer use of marijuana	Some use	Frequent use	Continuous self/close peer use of marijuana	
Female	Count	142	66	39	22	269
	% within Gender	52.8%	24.5%	14.5%	8.2%	100.0%
	% within Marijuana Use	42.0%	38.4%	40.2%	31.4%	39.7%
Male	Count	196	106	58	48	408
	% within Gender	48.0%	26.0%	14.2%	11.8%	100.0%
	% within Marijuana Use	58.0%	61.6%	59.8%	68.6%	60.3%
Total	Count	338	172	97	70	677
	% within Gender	49.9%	25.4%	14.3%	10.3%	100.0%
	% within Marijuana Use	100.0%	100.0%	100.0%	100.0%	100.0%

Chi-Square Tests			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	2.891 ^a	3	.409

- Statistics with probabilities > .01 are not significant, showing no gender difference
- There are no significant differences in the amount of marijuana use by girls and boys

Table 5 Extent of Marijuana Use X City (Not Corrected for Age at Referral)

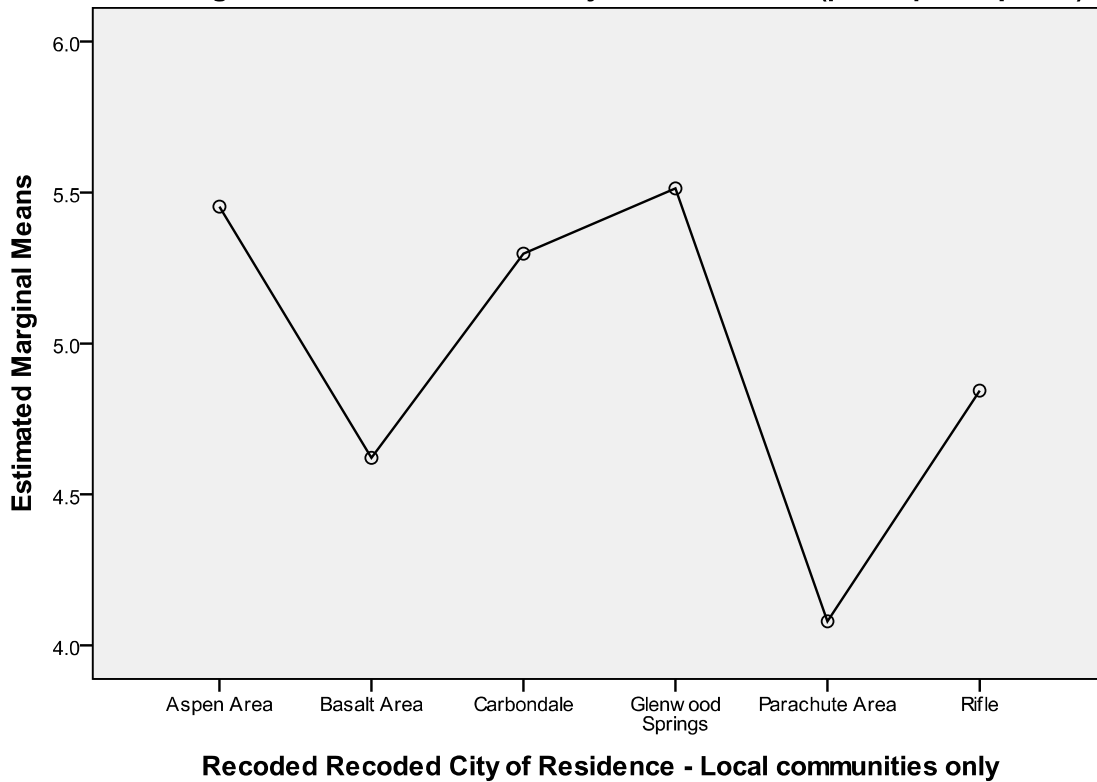
City	N	Mean	Std. Deviation
Aspen Area	57	2.12	1.119
Glenwood Springs	130	2.05	1.109
Carbondale	91	2.01	1.016
Basalt Area	56	1.79	.929
Rifle	290	1.71	.974
Parachute Area	44	1.59	.787
Total	668	1.85	1.018

ANOVA					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	21.126	5	4.225	4.175	.001
Within Groups	669.904	662	1.012		
Total	691.030	667			

- Statistics with probabilities < .01 are highly significant, showing meaningful use differences
- Marijuana consumption is highest among youth from Aspen and Glenwood Springs

Fig. 4 Extent of Marijuana Use X City with Age Con-

Estimated Marginal Means of Factor - Marijuana Use: SUM (pre23,pre32,pre37)



trolled

Covariates appearing in the model are evaluated at the following values: Pre01. Client Age = 6.00

- Most YouthZone clients use marijuana to an extent very similar to that of their close peers

Table 6 Pre-to-Post Screening Extent of Marijuana Use

Marijuana Use Pre	Statistics	Marijuana Use - Post				Total
		No self/close peer use of marijuana	Some use	Frequent use	Continuous self/close peer use of marijuana	
No self/close peer use of marijuana	Count	270	52	12	5	339
	% within Pre	79.6%	15.3%	3.5%	1.5%	100.0%
	% within Post	75.8%	27.5%	13.8%	10.6%	49.9%
Some use	Count	63	82	25	3	173
	% within Pre	36.4%	47.4%	14.5%	1.7%	100.0%
	% within Post	17.7%	43.4%	28.7%	6.4%	25.5%
Frequent use	Count	20	41	25	11	97
	% within Pre	20.6%	42.3%	25.8%	11.3%	100.0%
	% within Post	5.6%	21.7%	28.7%	23.4%	14.3%
Continuous self/close peer use of marijuana	Count	3	14	25	28	70
	% within Pre	4.3%	20.0%	35.7%	40.0%	100.0%
	% within Post	.8%	7.4%	28.7%	59.6%	10.3%
Total	Count	356	189	87	47	679
	% within Pre	52.4%	27.8%	12.8%	6.9%	100.0%
	% within Post	100.0%	100.0%	100.0%	100.0%	100.0%

Chi-Square Tests			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	356.755 ^a	9	.000

- Statistics with probabilities < .01 are highly significant, showing meaningful use differences
- Use of marijuana among YouthZone clients declined during their services

Table 7 Extent of Marijuana Use X Program Year

Marijuana Use Pre		Intake Year				Total
		2007 In-take	2008 In-take	2009 In-take	2010 In-take	
No self/close peer use of marijuana	Count	33	112	143	50	338
	% within Intake Year	53.2%	48.1%	53.6%	43.1%	49.9%
Some use	Count	15	59	78	21	173
	% within Intake Year	24.2%	25.3%	29.2%	18.1%	25.5%
Frequent use	Count	10	35	27	25	97
	% within Intake Year	16.1%	15.0%	10.1%	21.6%	14.3%
Continuous self/close peer use of marijuana	Count	4	27	19	20	70
	% within Intake Year	6.5%	11.6%	7.1%	17.2%	10.3%
Total	Count	62	233	267	116	678
	% within Intake Year	100.0%	100.0%	100.0%	100.0%	100.0%

Chi-Square Tests			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	23.125 ^a	9	.006

- Statistics with probabilities < .01 are highly significant, showing meaningful use differences
- Marijuana use has increased significantly over the years

Table 8 Extent of Marijuana Use X Prior YouthZone Program Client

Marijuana Use Pre		Previously successfully completed YZ non-SB94 court program?		Total
		No	Yes	
No self/close peer use of marijuana	Count	220	35	255
	% within Previous	50.5%	44.9%	49.6%
Some use	Count	112	20	132
	% within Previous	25.7%	25.6%	25.7%
Frequent use	Count	61	11	72
	% within Previous	14.0%	14.1%	14.0%
Continuous self/close peer use of marijuana	Count	43	12	55
	% within Previous	9.9%	15.4%	10.7%
Total	Count	436	78	514
	% within Previous	100.0%	100.0%	100.0%

Chi-Square Tests			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	2.303 ^a	3	.512

- Statistics with probabilities > .01 are not significant, showing no gender difference
- Youth who returned to YouthZone after having been previously served, had no higher use of marijuana than clients who were being seen for the first time

Table 9 Extent of Marijuana Use X Legal Offense Severity

Offense Severity		Marijuana Pre				Total
		No self/close peer use of marijuana	Some use	Frequent use	Continuous self/close peer use of marijuana	
No offense or minor offense	Count	181	86	28	16	311
	% within Offense	58.2%	27.7%	9.0%	5.1%	100.0%
	% within Marijuana Use	53.7%	50.0%	29.5%	22.9%	46.1%
Drug and alcohol-related offense	Count	89	63	60	50	262
	% within Offense	34.0%	24.0%	22.9%	19.1%	100.0%
	% within Marijuana Use	26.4%	36.6%	63.2%	71.4%	38.9%
Serious offense (Aggression or Major theft/property offense)	Count	67	23	7	4	101
	% within Offense	66.3%	22.8%	6.9%	4.0%	100.0%
	% within Marijuana Use	19.9%	13.4%	7.4%	5.7%	15.0%
	Count	337	172	95	70	674
	% within Offense	50.0%	25.5%	14.1%	10.4%	100.0%
	% within Marijuana Use	100.0%	100.0%	100.0%	100.0%	100.0%

Chi-Square Tests			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	79.253 ^a	6	.000

- Statistics with probabilities < .01 are highly significant, showing meaningful use differences
- Marijuana use was related to type of offense, with regular use more often associated with an arrest for possession/consumption

APPENDIX F: Case Manager and YouthZone Screening Client Pre-Post Changes

Table 10 Extent Marijuana Use Pre-to-Post

		Mean	N	t	Sig.
Pair 1	Factor - Marijuana Use: SUM (pre23,pre32,pre37)	5.01	679	4.218	.000
	Factor - Marijuana Use: SUM (pre23,pre32,pre37)	4.64	679		

- Statistics with probabilities < .01 are highly significant, showing meaningful use differences
- When all marijuana use items were combined for each client, and then compared pre-post, changes were highly significant showing decline in use frequency and amount

Table 11 Extent of Marijuana Use X School and Community Involvement

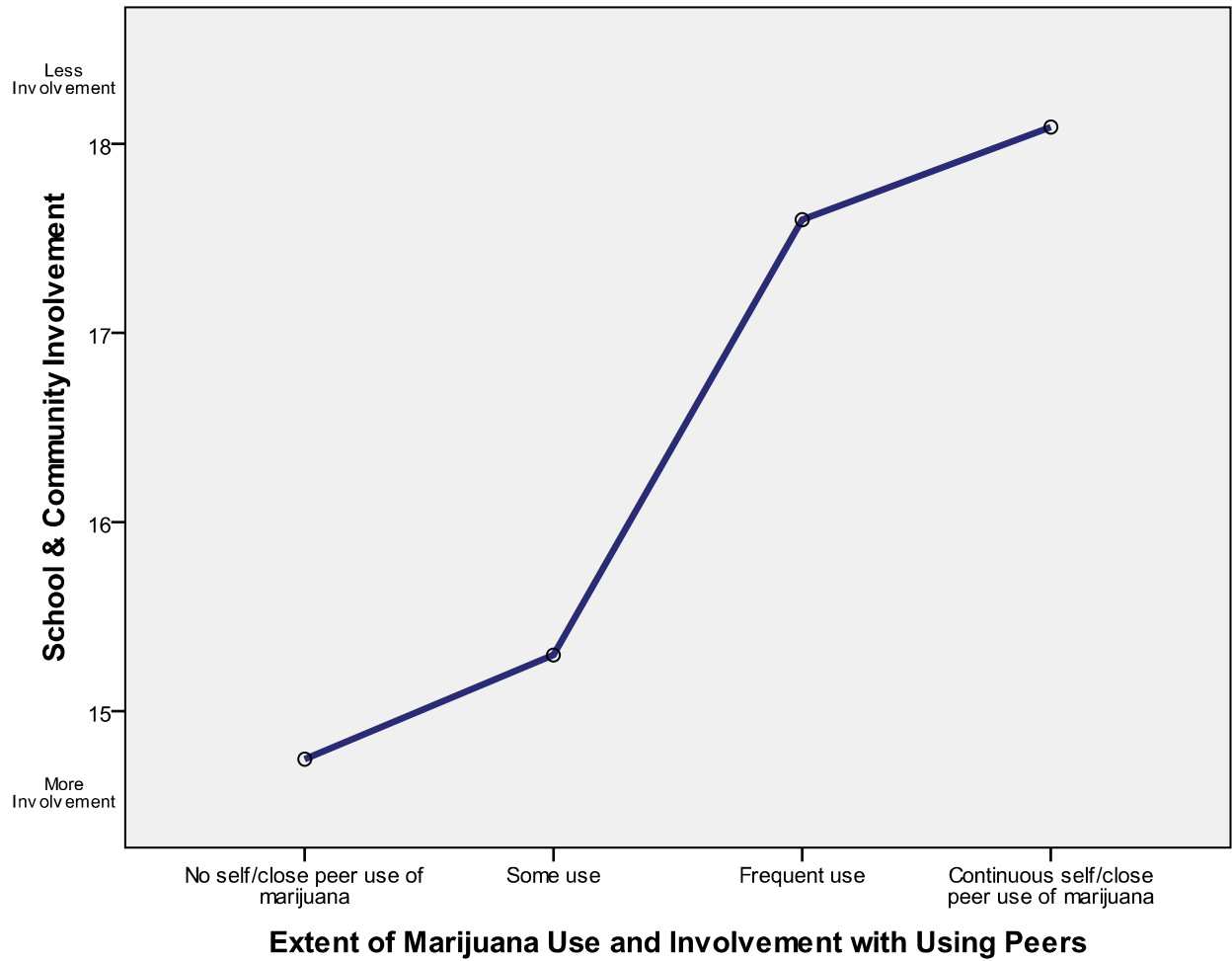
	N	Mean	Std. Deviation
No self/close peer use of marijuana	339	14.66	4.839
Some use	173	15.32	5.521
Frequent use	97	17.73	6.483
Continuous self/close peer use of marijuana	70	18.21	6.460
Total	679	15.63	5.606

ANOVA					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1231.368	3	410.456	13.802	.000
Within Groups	20074.319	675	29.740		
Total	21305.688	678			

- Statistics with probabilities < .01 are highly significant, showing meaningful use differences
- Marijuana use was highly related to lack of school and community involvement

APPENDIX F: Case Manager and YouthZone Screening Client Pre-Post Changes

Fig. 5. School-Community Involvement and Extent of Marijuana Use



- Marijuana use was highly related to lack of school and community involvement