



2023

WV Youth in Group Residential and Psychiatric Residential Treatment Facilities



Table of Contents

About This Report	Pg. 2
Purpose of Review	Pg. 2
Case Selection	Pg. 2
Data Collection	Pg. 2
Data Elements	Pg. 2
Latent Class Analysis	Pgs. 3-17
• Data	Pg. 3
• Actionable vs. Non-Actionable	Pg. 3
• Number of Classes	Pg. 3-4
• Class Distribution Comparison	Pg. 5
• Class Descriptions	Pgs. 6-9
• Class Comparison at the Item Level	Pgs. 10-12
• Item Descriptions	Pgs. 12-17
Summary and Next Steps	Pg. 18
Appendix A-Overall Demographics	Pgs. 19-25
Appendix B-Class Demographics	Pgs. 26-36
Appendix C-CANS Items Included in Analysis	Pg. 37
Appendix D-Item Probability	Pg. 38

About this Report

This collaborative report was prepared and edited by the Center of Excellence for Recovery Department of Marshall University and the Center of Innovation in Population Health of the University of Kentucky.

- Tammy Pearson, MA, Sr. Associate Director for the Center of Excellence for Recovery, Marshall University
- Linda Gibson, MSW, Assistant TCOM Director, Marshall University
- Christina Bertelli-Coleman, MSW, BSS Evaluator, Marshall University
- Shannon McKay, BA, Embedded Analyst, Marshall University
- Michaela Voit, BA, Senior Data Management Analyst, University of Kentucky

To request information about this report, please contact Tammy Pearson at Marshall University's Center of Excellence for Recovery at tpearson@marshall.edu.

Purpose of Review

In August 2020, WV had over 700 youth who were in a group residential or psychiatric residential treatment facility. Amongst those, over 300 youth were in an out-of-state facility. The states first Latent Class Analysis Report was produced at that time. In 2023 it was decided to do another report due to the availability of more data and the implementation of wraparound statewide. The state partnered with Marshall University's Center of Excellence for Recovery and the University of Kentucky's Center of Innovation in Population Health to identify the similarities of these youth and their needs through a latent class analysis. This report will assist the state in determining what level of intervention is necessary amongst existing community-based services that can be utilized to keep the youth in a home-like setting and what new services may need to be developed.

Case Selection

Cases were identified through the WV CANS System. The cases selected had been in at least one residential setting between January 2023 and September 2023. One randomly selected Child and Adolescent Needs and Strengths (CANS) Assessment for each youth was selected that fell between this time frame. There were a total of 909 youth and their CANS reviewed.

Data Collection

The Child Adolescent Needs and Strengths information was retrieved from the WV CANS System. Demographic data was pulled from the WV CANS System, existing state reports and from the PATH System.

Data Elements

The following data elements were reviewed:

- County
- Judicial District
- In-State or Out-of-State
- Gender
- Age
- Trauma
- Intellectual Disabilities
- Substance Use

Latent Class Analysis

Latent Class Analysis (LCA) is a person-centered measurement model in which individuals can be classified into mutually exclusive and exhaustive latent classes based on their pattern of answers on a set of variables. A team from Marshall Universities Center of Excellence for Recovery worked with the Innovation in Population Health Center at the University of Kentucky to perform a Latent Class Analysis.

Data

Data used for the LCA was based on a randomly selected Child and Adolescent Needs and Strengths (CANS) assessment completed for each unduplicated youth. There were 909 cases that were part of the latent class analysis. The number of cases reviewed in the LCA in 2021 was 368. Only CANS “Needs” items were reviewed, and some items were eliminated. This was due to 25% or less people reporting the item as actionable, or the item not playing a significant part in the analysis, such as the Recreation item. Some items that were going to be experienced by the majority of youth, such as Disruption in Caregiving, were not included. Items that were included in the analysis can be found in **Appendix C**.

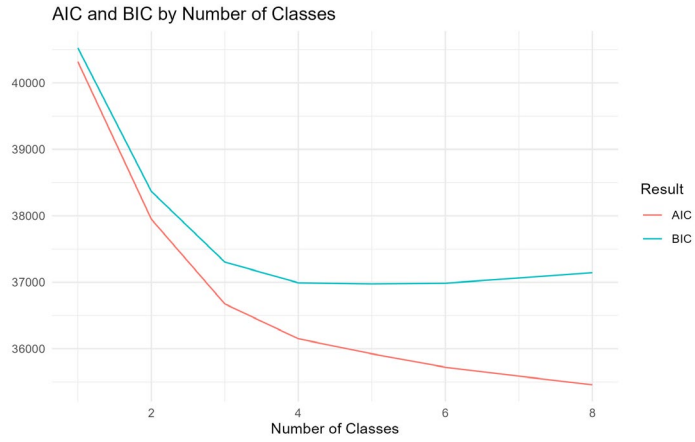
Actionable vs. Non-Actionable Items

In the information below you will see the term actionable. The CANS ratings that are a “2” or a “3” are considered actionable. That means some type of action/service treatment/etc. should occur and the issues should be addressed in a treatment/service/case plan. Actionable items were used to determine classes and descriptions.

Number of Classes

The number of classes is determined by identifying commonality (latent groups or subtypes) among the data (CANS items). The LCA model evaluates the data input to determine these latent groups. The LCA program is run multiple times to determine the best **model** fit. The CANS items were fit using a one-class model, then a two-class model, and continued in this manner up to a seven-class model. Model fit statistics and visual inspection of the resulting models were used to determine the final number of classes. Bayesian information criterion (BIC) is a criterion for model selection among a finite set of models. It is based, in part, on the likelihood function, and it is closely related to Akaike information criterion (AIC).

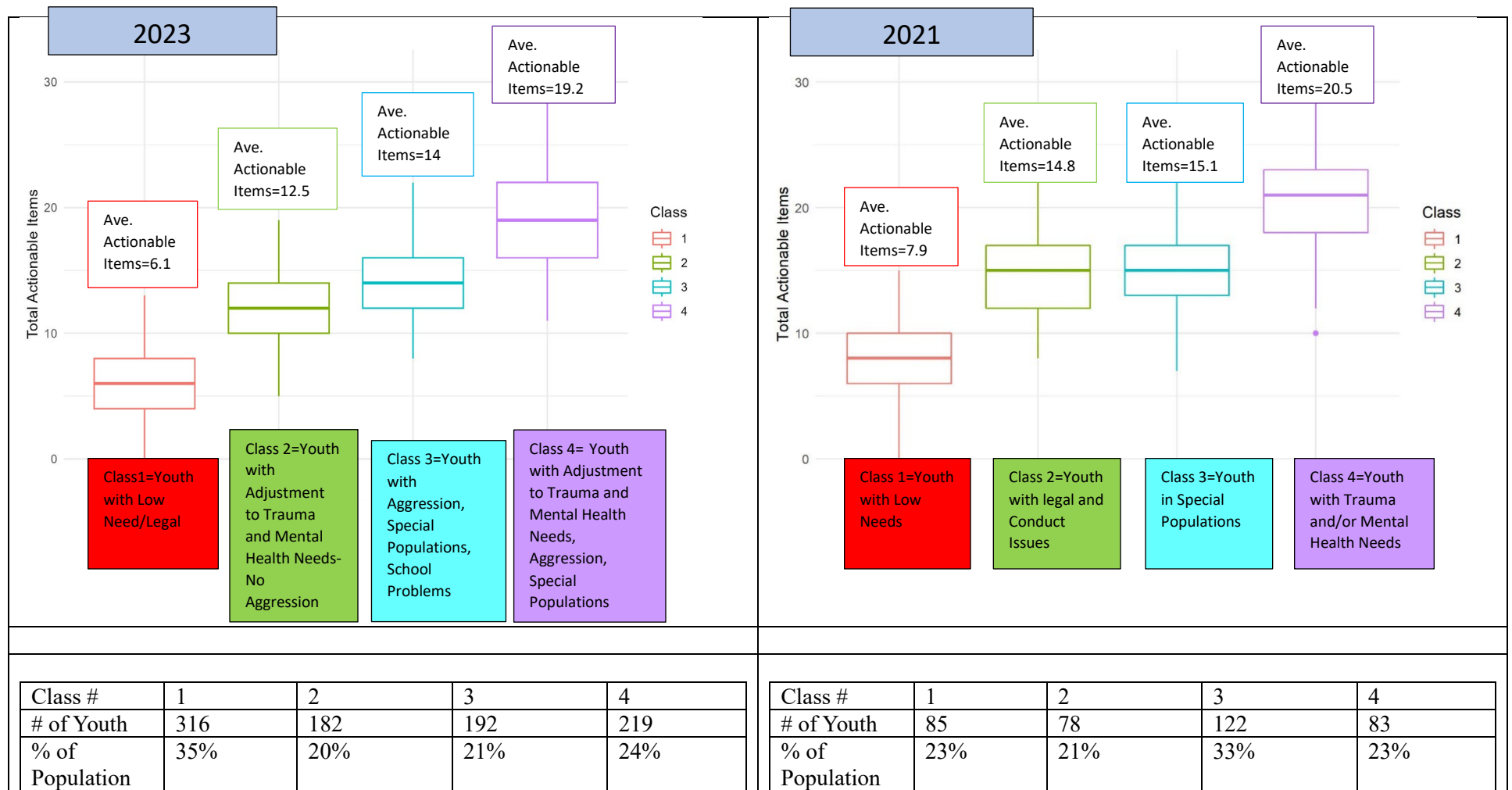
An AIC score is a number used to determine which machine learning model is best for a given data set in situations where one can't easily test a data set. An AIC test is most useful when you're working with a small data set or time series analysis. The lower the AIC score the better. A lower AIC or BIC value indicates a better fit.



From the information above, the 4 class model was the best match for WV. Once the BIC line begins to level out more classes will not provide relevant information. This was also the best fit in 2021.

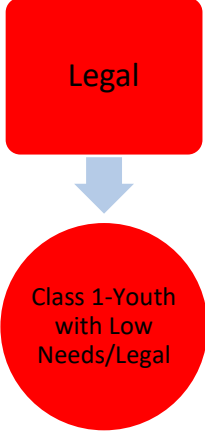
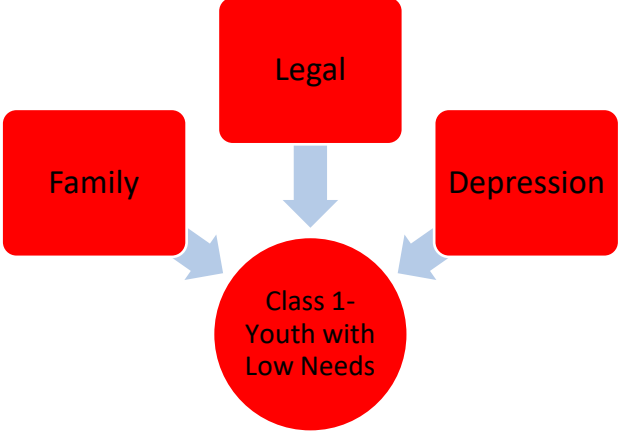


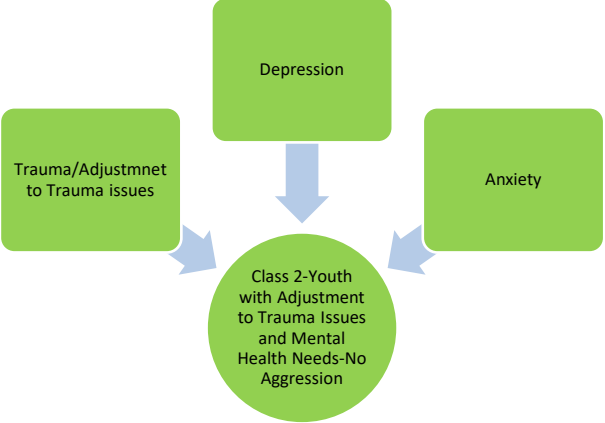
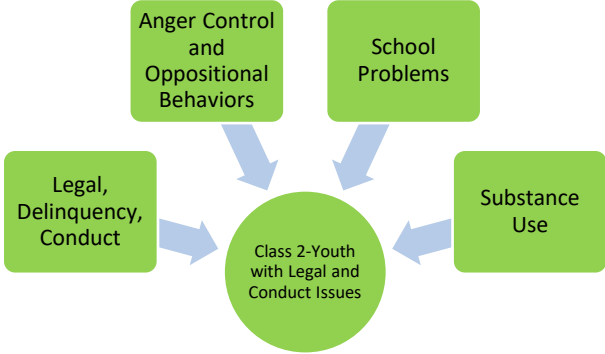
Class Distribution Comparison

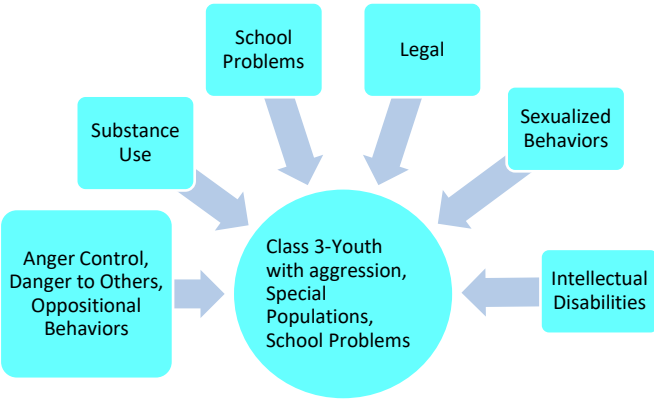
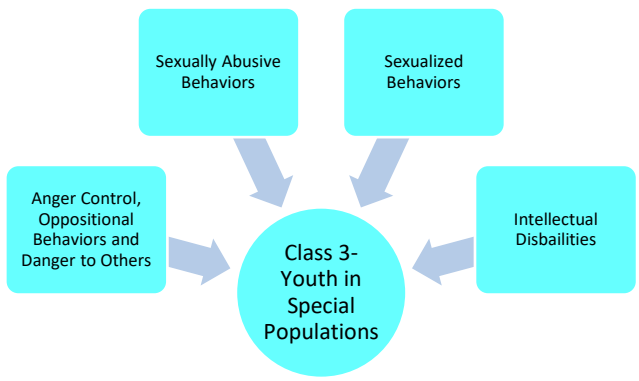


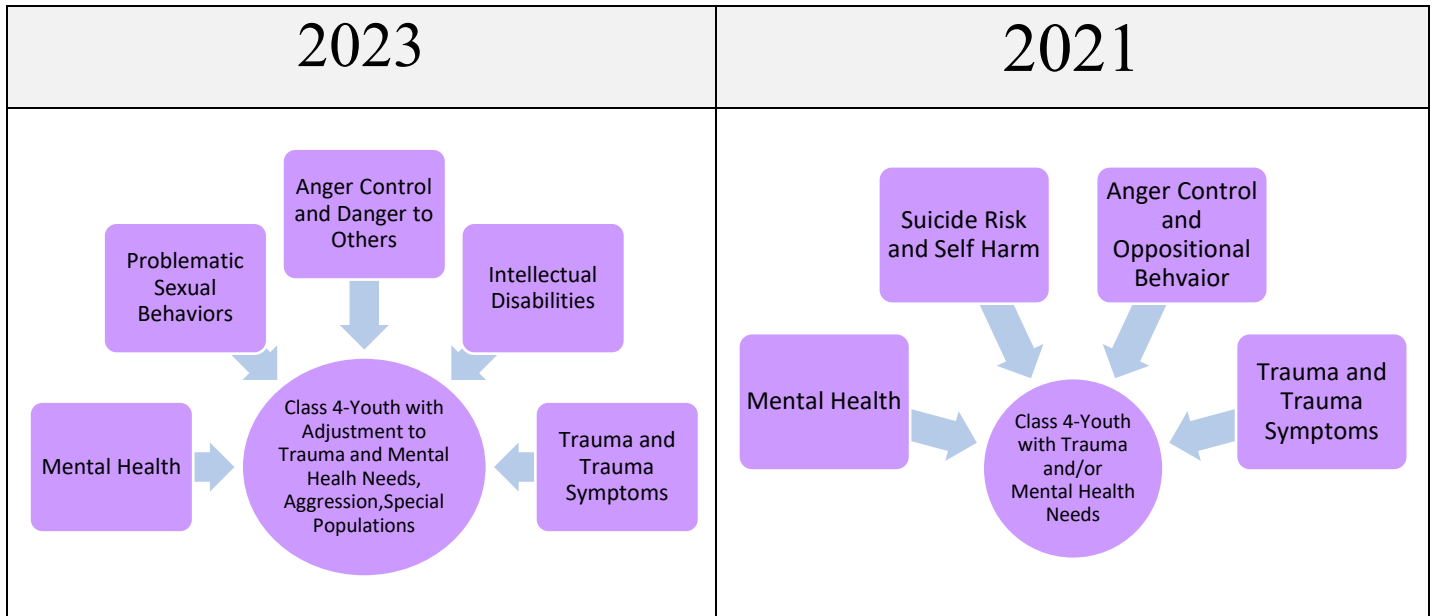
It is important to note that class does NOT equal the level of care. The classes describe the needs of the youth and NOT the level of care needed.

Class Descriptions

2023	2021
	
<ul style="list-style-type: none"> • This class has the least number of actionable needs (6.1 average) in 2023. Class 1 has the most youth in it with 316 youth in this class that made up 35% of the total population reviewed. The percentage of youth was much higher than in 2021 when only 23% of the youth fell in this class. • Although Class 1 still contains youth with low level of needs, in 2023 the need most often reported in this class is legal. Family problems and depression were not major issues indicated in the Class 1 in 2023. • With the low level of needs and limited actionable items, this class could be served in a community setting. Most (77%) of the youth were placed in-state but 23% were in an out-of-state facility. 	

2023	2021
	
<ul style="list-style-type: none"> • On average this class had (12.5) actionable items. One-hundred and eighty-two (182) youth were in this class and made up 20% of the total population reviewed. • In 2021, Class 2 youth were ones that experienced legal problems and conduct issues. They also had substance use and school problems. Class 2 youth in 2023 look much different. These youth have experienced trauma and are having problems adjusting. They experience depression and anxiety but less anger control problems than seen in class 4 youth with trauma. Problems within the family structure may be present. • Class 2 youth from 2021 are now found on Class 3 in 2023. 	

2023	2021
	
<ul style="list-style-type: none"> • This class had on average (14) items that were actionable. This class had 192 youth in it that represented 21% of the youth reviewed. • Class 3 youth in 2021 represented youth with anger control problems and dangerous behaviors to others, conduct disorder and youth who fell into special populations, including youth with and intellectual disability or youth with problematic sexual behaviors. In 2023, Class 3 still includes these youth but now include youth with substance use issues and school behavior problems. This indicates that the youth with substance use problems in 2023 have more actionable items that would also include school and legal problems. Youth with truancy problems were more likely to fall in this class. • Youth with problematic sexual behaviors fall both in this class but also can be found in Class 4. This is the same for youth with an intellectual disability. Problems within the family structure may be present. This class has the highest probability of having problems with their living situation and being able to remain in the home. This class also has a high probability of poor social functioning and impulsivity but not as high as class 4. • Most (91%) of the youth were being served in-state. Kids below the age of 10 only fell in this class (6%) of the time. Females can account for 34-35% of the population in each class but Class 3. Females only represent 18% of the youth. 	



- This class has the greatest number of needs reported. This class had on average had (19.2 average) items. This class was the second largest with 219 youth that made up 24% of the total population reviewed.
- Class 4 continues to represent youth who have experienced trauma. Since both Class 2 and Class 4 in 2021 contain youth with Trauma, the factor that sets them apart is anger control and aggression. In Class 2 the youth have a lower probability of anger and aggression than in Class 4.
- Suicidal Risk was not indicated as an issue in this class in 2023. Suicidal risk, although there was a low probability, was seen more often in Class 2 and Class 3.
- Problems within the family structure may be present. This class has a probability of having problems with their living situation and being able to remain in the home but not as high as class 3. This class also has a high probability of poor social functioning and impulsive behaviors.
- The youth who fell in the special populations categories in 2021 are now represented in both Class 3 and Class 4.

Class Comparison at the Item Level

See **Appendix B** for all items and probability.

Class 1- Youth with Low Needs/Legal		Class 2-Youth with Adjustment to Trauma and Mental Health Needs-No Aggression		Class 3-Youth with Aggression, Special Populations, School Problems		Class 4-Youth with Adjustment to Trauma and Mental Health Needs, Aggression, Special Populations	
Family, Social and Living Situation							
		Family	.62	Family	.74	Family	.86
				Living Situation	.90	Living Situation	.75
				Social Functioning	.70	Social Functioning	.84
Legal and Conduct							
Legal	.60			Legal	.81		
				Conduct	.69		
Mental Health							
		Depression	.68			Depression	.62
		Anxiety	.65			Anxiety	.52
						Affect Dysregulation	.56
Suicide Risk and Self Harm							
		Suicide Risk	.08	Suicide Risk	.05	Suicide Risk	.10
						Other Self Harm	.9
Anger Control, Aggression and Danger to Others							
				Anger	.84	Anger	.92
				Danger to others	.52	Danger to others	.58
				Oppositional	.91	Oppositional	.80
						Sexually Abusive Behaviors	.07
						Sexual Behaviors	.16
Attention and Impulsivity							
		Attention	.52	Attention	.71	Attention	.80
				Impulsivity	.84	Impulsivity	.89

Class 1- Youth with Low Needs/Legal		Class 2-Youth with Adjustment to Trauma and Mental Health Needs-No Aggression		Class 3-Youth with Aggression, Special Populations, School Problems		Class 4-Youth with Adjustment to Trauma and Mental Health Needs, Aggression, Special Populations	
School Issues							
				School Achievement	.58		
				School Attendance	.57		
				School Behavior	.88	School Behavior	.68
Trauma and Adjustment to Trauma							
		Emotional Abuse	.58			Emotional Abuse	.46
		Neglect	.71			Neglect	.67
		Physical Abuse	.63			Physical Abuse	.62
		Sexual Abuse	.59			Sexual Abuse	.33
		Witness to Criminal	.29			Witness to Criminal	.29
		Witness to Family	.46			Witness to Family Violence	.38
		Traumatic Grief	.38			Traumatic Grief	.31
		Adjustment to Trauma	.78			Adjustment to Trauma	.73
		Trauma Stress-Re-experiencing	.35			Trauma Stress-Re-experiencing	.32
						Trauma Stress-Hyperarousal	.66
		Trauma Stress-Avoidance	.32			Trauma Stress-Avoidance	.34
						Trauma Stress-Dissociation	.11
		Trauma Stress-Hyperarousal	.47			Trauma Stress-Hyperarousal	.66
						Trauma Stress-Numbing	.21
Substance Use							
				Substance Use	.57		
Intellectual Disability							
				Developmental/Intellectual Disability	.27	Developmental/Intellectual Disability	.37

Item Descriptions

Family, Social and Living Situation

Family

This item looks at the relationships in the family, arguing and domestic violence. Across all of the classes the chance of the family item as being actionable was identified, except in Class 1. Youth in Class 4 having the highest probability (.86).

Living Situation

This item refers to how the child is functioning in his/her current living arrangement, which could be with a relative, in a temporary foster home, shelter, etc. Actionable items indicate that there are significant problems in the residence and may be at risk of being moved from the living situation. For Class 1 and 2 the living situation was not considered a problem in most cases. Classes 3-4 indicated actionable ratings, with Class 3 youth having the highest probability of having problems associated with their living situation. (.90)

Social Functioning

This item refers to the child's social functioning from a developmental perspective. A youth with an actionable rating may have problems interacting with others and building and maintaining relationships. For example, the child may argue frequently with adults and peers and may lack ability to interact or play in group settings. The youth may be excessively withdrawn or aggressive with peers or adults and have notable difficulty relating to others. For Class 1 and 2, social functioning was not considered a problem in most cases. Classes 3 and 4 indicated actionable ratings, with Class 4 having the highest probability of having problems associated with social functioning (.84).

Legal and Conduct

Legal

This item describes the child's (**not** the family's) involvement with the legal system. Youth in this class could include involvement in the Juvenile or Adult Justice Systems. In Class 3, youth with Legal Issues has a probability of (.81) of having this as an actionable item. In Class 1 (.60), this is the only item standing out for this class. Since no other problems showed at least a 50% chance of being an actionable need, for Class 1 youth, these cases should be reviewed to determine other needs.

Delinquency

This rating includes both criminal behavior and status offenses that may result from the child or youth failing to follow required behavioral standards (e.g., truancy). Sexual offenses should be included as criminal behavior. Delinquency was most often reported in Class 3 (.27).

Conduct

This item includes antisocial behaviors like shoplifting, lying, vandalism, cruelty to animals, and assault. This dimension would include the symptoms of Conduct Disorder as specified in Standard Diagnostic Criteria. This item is in Class 3 and Class 4, with Class 3 having a probability of (.69) for having conduct as an actionable item.

Intentional Misbehavior

This rating describes intentional obnoxious social behaviors that a child engages in to intentionally force adults to sanction him/her. This item should reflect problematic intentional behaviors (socially unacceptable behavior for the culture and community in which he/she lives) that put the child at some risk of sanctions. It is not necessary that the child have awareness of the purpose of his/her misbehavior (to provoke sanctions/reactions) in order to be rated here as this behavior is not always conscious/planned behavior. This item had low probability of showing up in any class.

Mental Health

Depression

Youth in Class 2 and 4 had .62-.68 chance of an actionable rating on the depression item. This item is described as symptoms of irritable or depressed mood, social withdrawal, sleep disturbances, weight/eating disturbances, and loss of motivation. This dimension can be used to rate symptoms of the following psychiatric disorders as specified in STANDARD DIAGNOSTIC CRITERIA: Depressive Disorders (unipolar, dysthymia, NOS), Bipolar Disorder. Class 2 has the highest likelihood of having depression as an actionable item (.68), followed by Class 4 (.62)

Anxiety

This item describes the child's level of fearfulness, worrying or other characteristics of anxiety. This would be consistent with the other items related to trauma that this class is showing. Like depression, this item has at least a 50% of being actionable in Class 2 and 4. Class 2 has the highest likelihood of having anxiety as an actionable item (.65), followed by Class 4 (.52)

Attachment Difficulties

This item should be rated within the context of the child's significant parental or caregiver relationships. Caregiver may consistently misinterpret child cues, act in an overly intrusive way, or ignore/avoid child bids for attention/nurturance. Child may have ongoing difficulties with separation, may consistently avoid contact with caregivers, and may have ongoing difficulties with physical or emotional boundaries with others. Child is considered at ongoing risk due to the nature of his/her attachment behaviors. A child who meets the criteria for an Attachment Disorder in Standard Diagnostic Criteria would be rated here. Child may have experienced significant early separation from or loss of caregiver, or have experienced chronic inadequate care from early caregivers, or child may have individual vulnerabilities (e.g., mental health, developmental disabilities) that interfere with the formation of positive attachment relationships. This item is found most often in Class 4. This class has a probability of (.41) of having attachment difficulties as an actionable item. This would be consistent with the other items related to trauma that this class is showing. Even though youth with trauma are represented in Class 2, the probability of this item being rated at an actionable level is much lower (.18).

Sleep Disturbances

This item rates any disruptions in sleep regardless of the cause including problems with going to bed, staying asleep, waking up early or sleeping too much. This item was most often seen in Class 4 (.40). Sleep was included here because sleep problems can be related to depression, anxiety, or trauma.

Affect Dysregulation

These symptoms are characterized by difficulties with arousal regulation. This can include difficulties modulating or expressing emotions and energy states such as emotional outbursts or marked shifts in

emotions, overly constricted emotional responses, and intense emotional responses, and/or evidence of constricted, hyperarousal or quickly fluctuating energy level. The child may demonstrate such difficulties with a single type or a wide range of emotions and energy states. This item is found in Class 4. This class has a probability of (.56) of having affect dysregulation as an actionable item.

Suicide Risk and Self Harm

Suicide Risk

This rating describes both suicidal gestures, attempts and significant self-injurious behavior. This item did not show a high probability overall but most often is found in Class 4. This class has a probability of (.10) of having suicide risk as an actionable item.

Non-Suicidal Self Injury

This rating includes repetitive, physically harmful behavior that generally serves as a coping or self-soothing function to the child. This includes self-mutilation. This item did not show a high probability overall but most often is found in Class 4. This class has a probability of (.15) of having non-suicidal self-injury as an actionable item.

Other Self Harm

This rating includes reckless and dangerous behaviors that, while not intended to harm self or others, place the child or others in some jeopardy. Suicidal or self-injurious behaviors are NOT rated here. This item did not show a high probability overall but most often is found in Class 4. This class has a probability of (.09) of having self-harm as an actionable item.

Anger Control, Aggression and Danger to Others

Anger

This item captures the youth's ability to identify and manage their anger when frustrated. For youth with this item rated actionable, this means that his/her temper has gotten him/her in significant trouble with peers, family, and/or school. This level may also be associated with some physical violence or increased verbal outbursts. Others may fear the youth. This item is seen in Classes 3 and 4. The highest probability of this item being actionable is in Class 4 (.94) followed by Class 3 (.84)

Oppositional

This item is intended to capture how the child relates to authority. Oppositional behavior is different from conduct disorder in that the emphasis of the behavior is on non-compliance with authority rather than inflicting damage and hurting others. This item is seen in Classes 3 and 4. This item has the highest probability in Class 3 (.91) followed by Class 4 (.80)

Danger to Others

This rating includes actual and threatened violence. Imagined violence, when extreme, may be rated here. Class 3 and Class 4 had this item with the highest probability being in Class 4 (.58) as compared to Class 3 (.52).

Sexually Abusive Behaviors

Sexually abusive behavior includes both aggressive sexual behavior and sexual behavior in which the child or adolescent takes advantage of another person, including a younger or less powerful child through

seduction, coercion, or force. This item did not show a high probability overall but most often is found in Class 4. This class has a probability of (.07) of having this as an actionable item.

Sexualized Behaviors

Includes behavior both age-inappropriate or highly sexualized behaviors that may place a child at risk for victimization or risky sexual practices. This would include sexually reactive behaviors. The child may exhibit more frequent sexually provocative behaviors in a manner that impairs functioning, or poses legal risk, engage in promiscuous sexual behaviors, or have unprotected sex with multiple partners. This item did not show a high probability overall but most often is found in Class 4. This class has a probability of (.16) of having this as an actionable item.

Attention and Impulsivity

Attention and Concentration

Problems with attention, concentration and task completion would be rated here. These may include symptoms that are part of STANDARD DIAGNOSTIC CRITERIA Attention-Deficit Hyperactivity Disorder. Inattention/distractibility not related to opposition would also be rated here. This item was actionable for youth in Class 2-4. The likelihood steadily increased with the largest probability being in Class 4 (.80).

Impulsivity

Problems with impulse control, impulsive behaviors, including motoric disruptions would be rated here. This item was seen across Classes 2-4. The highest probability of the item of being actionable is found in Class 3 (.84) and Class 4 (.89)

School Issues and Social Functioning

School Achievement

This item describes academic achievement and functioning. A youth with an actionable rating may be failing some or most subjects and/or be at risk of failing the current grade. The youth may be more than one year behind. This item is found most often as being actionable in Class 3. This class has a probability of (.58) of having school achievement as an actionable item.

School Behavior

This item rates the behavior of the child or youth in school or school-like settings (e.g., Head Start, pre-school). A youth with an actionable rating may be disruptive in school and may receive sanctions including suspensions or multiple detentions. The youth's school placement may be in jeopardy due to behavior. This item is found in Class 3 and 4. Class 3 has a probability of (.88) and Class 4 (.68) of having school behavior as an actionable item.

School Attendance

This item describes the child's pattern of attending school and identifies truancy issues. The youth's school placement may be in jeopardy due to behavior. This item is found in Class 3 This class has a probability of (.57) of having school attendance as an actionable item.

Trauma and Adjustment to Trauma

Class 2 and Class 4 represent the youth who have experienced trauma and problems of adjustment to trauma. The youth in class 4 have more trauma stress symptoms.

Traumatic Grief

This rating describes the level of traumatic grief the youth is experiencing due to death or loss/separation from significant caregivers, siblings, or other significant figures. This item did not show a high probability overall but most often is found in Class 2 (.38) and Class 4 (.31).

Trauma Adjustment

This item covers the youth's reaction to any potentially traumatic or adverse childhood experiences. Any child who meets diagnostic criteria for a trauma-related adjustment disorder, posttraumatic stress disorder and other diagnoses from STANDARD DIAGNOSTIC CRITERIA that the child may have as a result of their exposure to traumatic/adverse childhood experiences would be rated as a 2 or 3 on this item.

This item is found in both Class 2 (.78) and Class 4 (.73)

Trauma Stressor-Hyperarousal

These symptoms include difficulty falling asleep, irritability or outbursts of anger, difficulty concentrating, hypervigilance and/or exaggerated startle response. Children may also commonly manifest physical symptoms such as stomach-aches and headaches. These symptoms are part of the STANDARD DIAGNOSTIC CRITERIA for PTSD. This item is found most often in Class 4. This class has a probability of (.66) of having hyperarousal as an actionable item.

Trauma Stressor-Re-experiencing

These symptoms consist of intrusive memories or reminders of traumatic events, including nightmares, flashbacks, intense reliving of the events, and repetitive play with themes of specific traumatic experiences. These symptoms are part of the STANDARD DIAGNOSTIC CRITERIA for PTSD. This item is found in Class 2 and Class 4. Class 2 has a probability of (.35) and Class 4 (.32) of having re-experiencing as an actionable item.

Trauma Stressor-Dissociation

Symptoms included in this dimension are daydreaming, spacing, or blanking out, forgetfulness, fragmentation, detachment, and rapid changes in personality often associated with traumatic experiences. This dimension may be used to rate dissociative disorders (e.g., Dissociative Disorder NOS, Dissociative Identity Disorder) but can also exist when other diagnoses are primary (e.g., PTSD, depression). This item did not show a high probability overall but most often is found in Class 4. This class has a probability of (.11) of having this as an actionable item.

Trauma Stressor-Numbing

These symptoms include numbing responses that are part of the STANDARD DIAGNOSTIC CRITERIA for PTSD. These responses were not present before the trauma. This child may have a blunted or flat emotional state or have difficulty experiencing intense emotions or feel consistently detached or estranged from others following the traumatic experience. This child may have a markedly diminished interest or participation in significant activities and a sense of a foreshortened future. This item did not show a high probability overall but most often is found in Class 4. This class has a probability of (.21) of having this as an actionable item.

Trauma Stressor-Avoidance

These symptoms include efforts to avoid stimuli associated with traumatic experiences. These symptoms are part of the STANDARD DIAGNOSTIC CRITERIA for PTSD. Youth may avoid thoughts or feelings associated with the trauma, the youth may also avoid activities, places, or people that arouse recollections of the trauma. The youth may be unable to recall important aspects of the trauma. This item is found in Class 2(.32) and Class 4 (.34).

Substance Use

Substance Use

These symptoms include use of alcohol and illegal drugs, the misuse of prescription-medications and the inhalation of any substance for recreational purposes. This rating is consistent with Standard Diagnostic Criteria Substance-related Disorders. The youth may have a substance use problem that impairs their ability to function. Substance abuse problems may present significant complications to the coordination of care for the individual. This item is found in Class 3. This class has a probability of (.57) of having substance use as an actionable item.

Intellectual Disabilities

Developmental/Intellectual

This item rates the presence of Intellectual or Developmental Disabilities. All developmental disabilities occur on a continuum; a child with Autism may be designated a 0, 1, 2, or 3 depending on the significance of the disability and the impairment. Developmental disabilities are a group of conditions due to an impairment in physical, learning, language, or behavior areas. The term developmental disability refers to a severe and chronic disability that is attributable to a mental or physical impairment that begins before an individual reaches adulthood. These disabilities include intellectual disability, cerebral palsy, epilepsy, autism, and disabling conditions closely related to intellectual disability or requiring similar treatment. This item is found highest in Class 3 (.27) and Class 4 (.37).

Summary

WV reviewed 909 youth who were in group residential facilities and psychiatric residential facilities both in-state and out-of-state. Demographic information was collected, and the major findings are as follows:

- The majority (77%) of youth that were reviewed in group residential and psychiatric residential treatment facilities were in state.
- The majority (60%) of youth served were ages 15-17 years old.
- The majority (64%) of youth are males.
- 86% of the youth had at least 1 trauma experience.
- 27% of the youth have substance use issues that required action.

There were 909 cases reviewed in the latent class analysis (LCA). The 4-model class fits WV's data the best. The classes are:

- Class 1-Youth with Low Needs/Legal
- Class 2-Youth with Adjustment to Trauma and Mental Health Needs-No aggression
- Class 3-Youth with Aggression, Special Populations, School Problems
- Class 4-Youth with Adjustment to Trauma and Mental Health Needs-Aggression, Special Populations

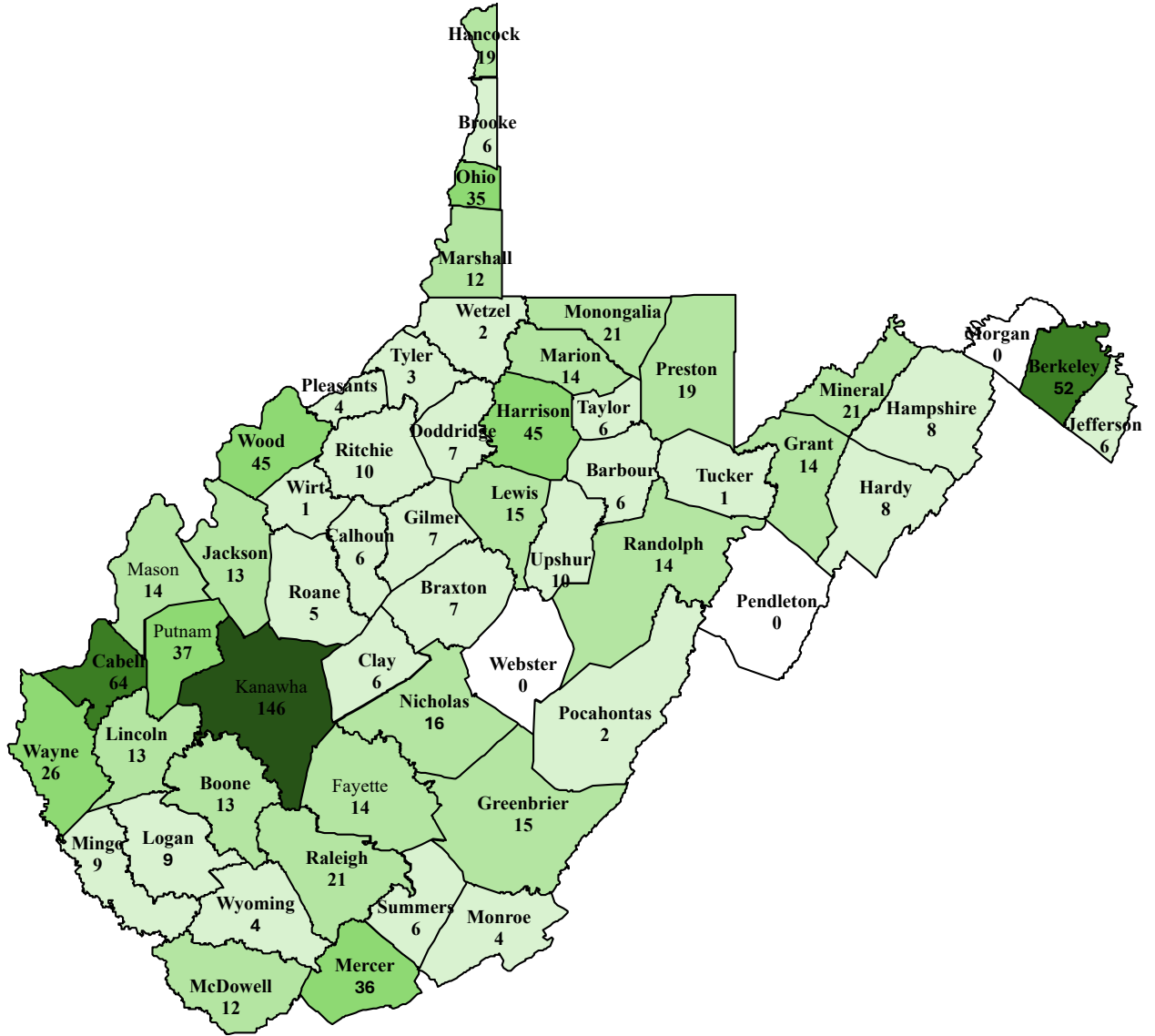
Next Steps

- A more detailed review of each youth in the classes above may be needed to determine if age, gender, race, other demographic information, and diagnosis are a factor.
- The data in this report should be used to enhance existing services and develop new ones to address the needs of each class. The demographic information as well as the latent class analysis information will guide in decision making by state leaders.
- Experts that work with youth with trauma, intellectual disabilities, substance use disorders and mental health needs should be consulted. They should strive to plan for a continuum of care with an emphasis on community-based services.

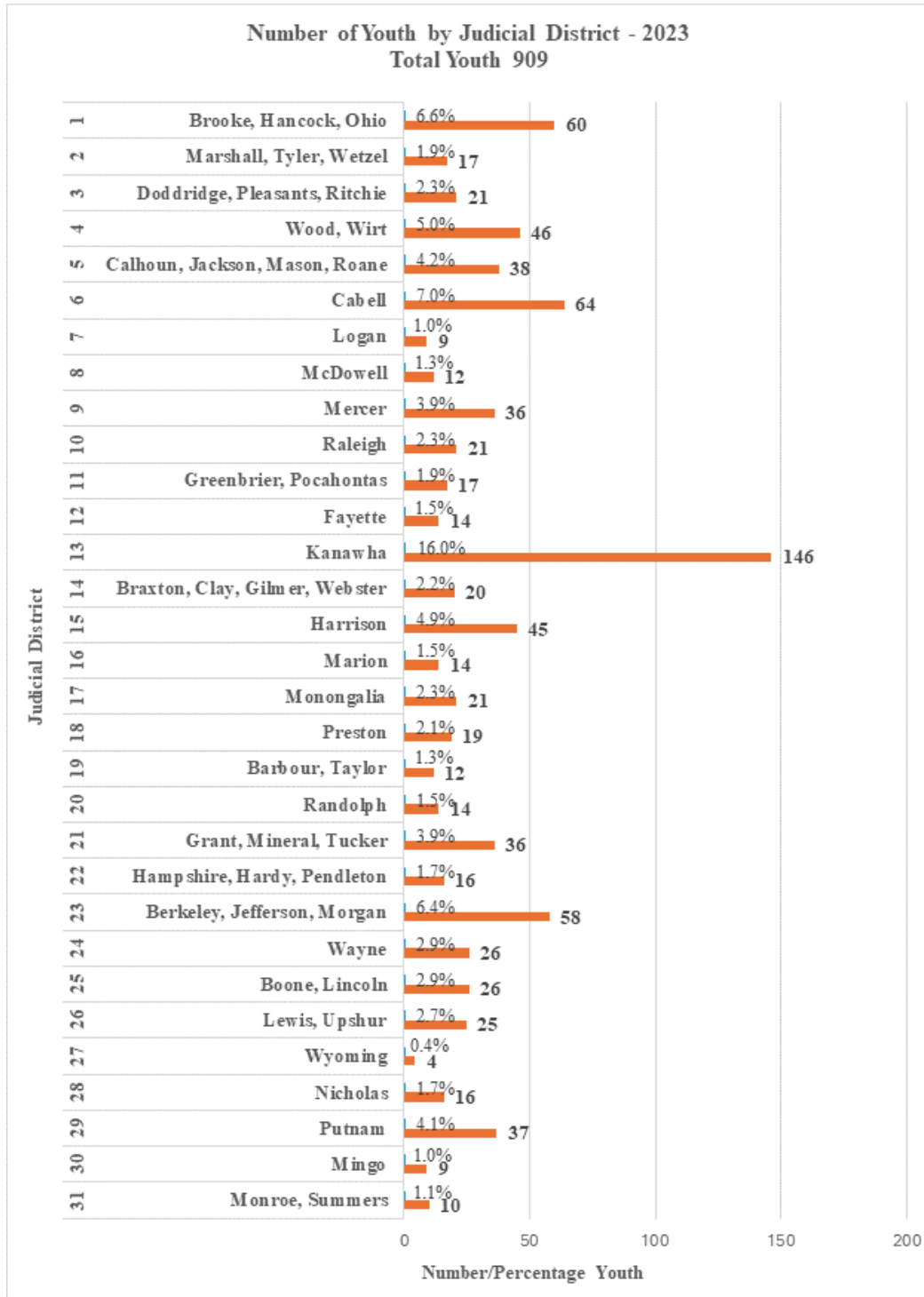
Appendix A

Overall Demographics

Number of Youth by County

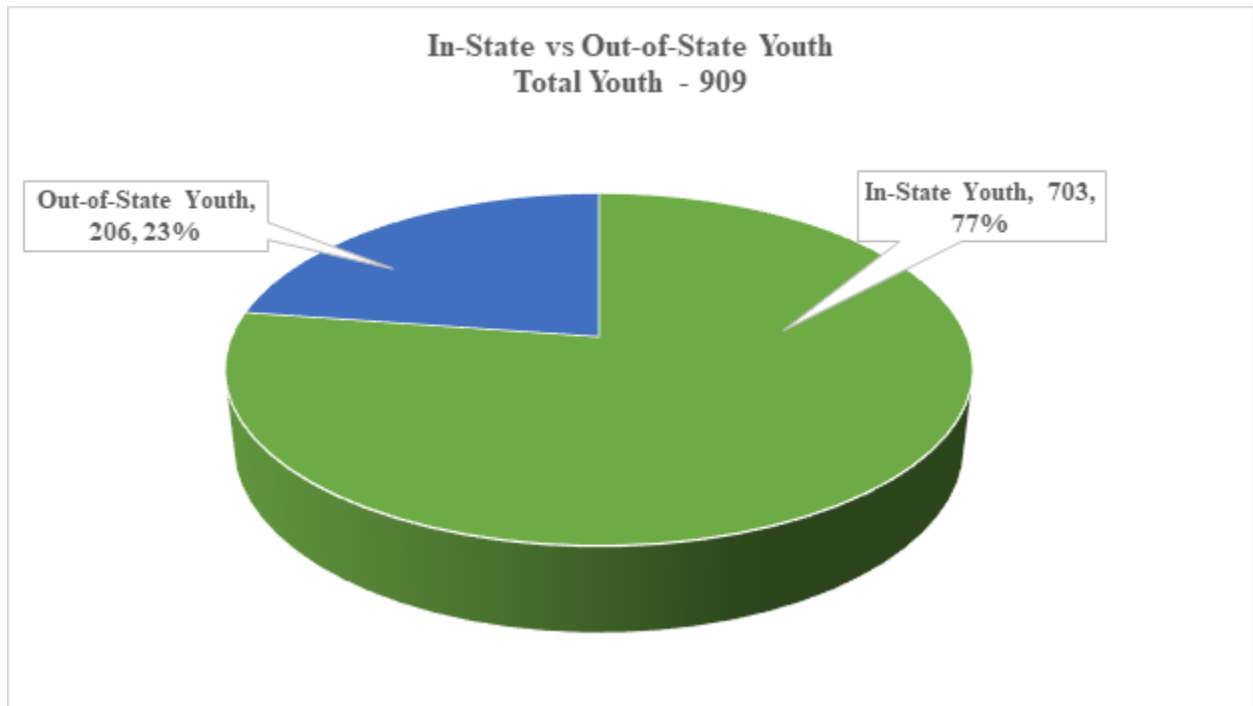


Judicial Districts



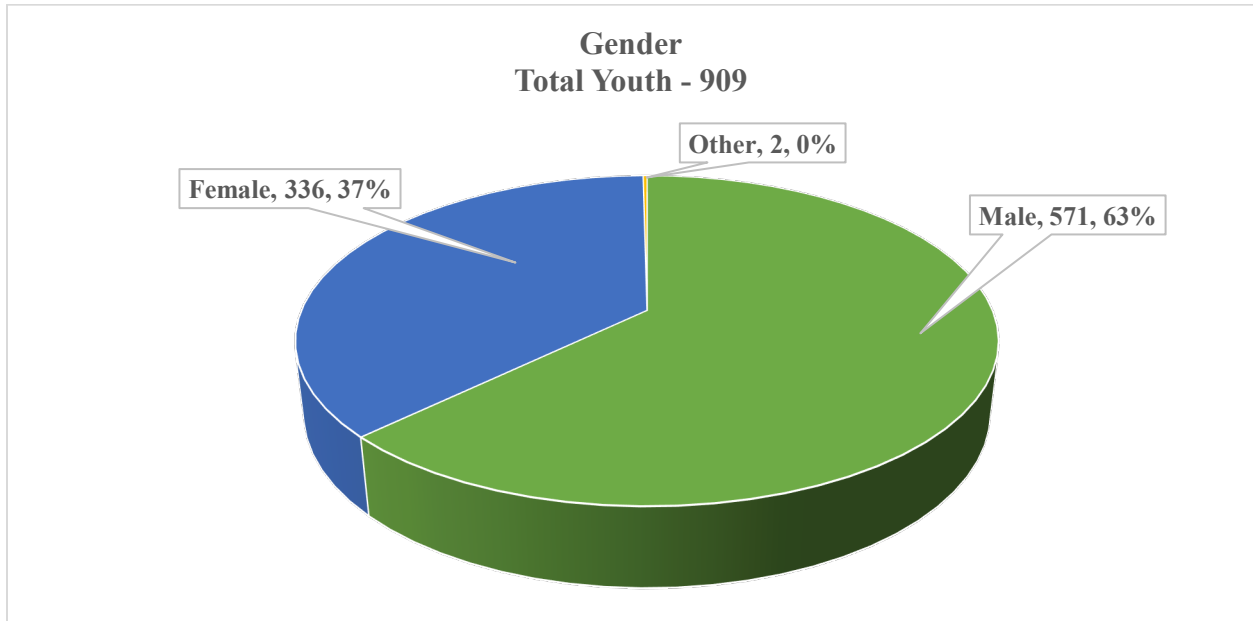
Youth from all judicial districts were represented. The most were from the Judicial District 13 (Kanawha), 6 (Cabell), 1 (Brooke, Hancock, Ohio), and 23 (Berkeley, Jefferson, Morgan).

Placement

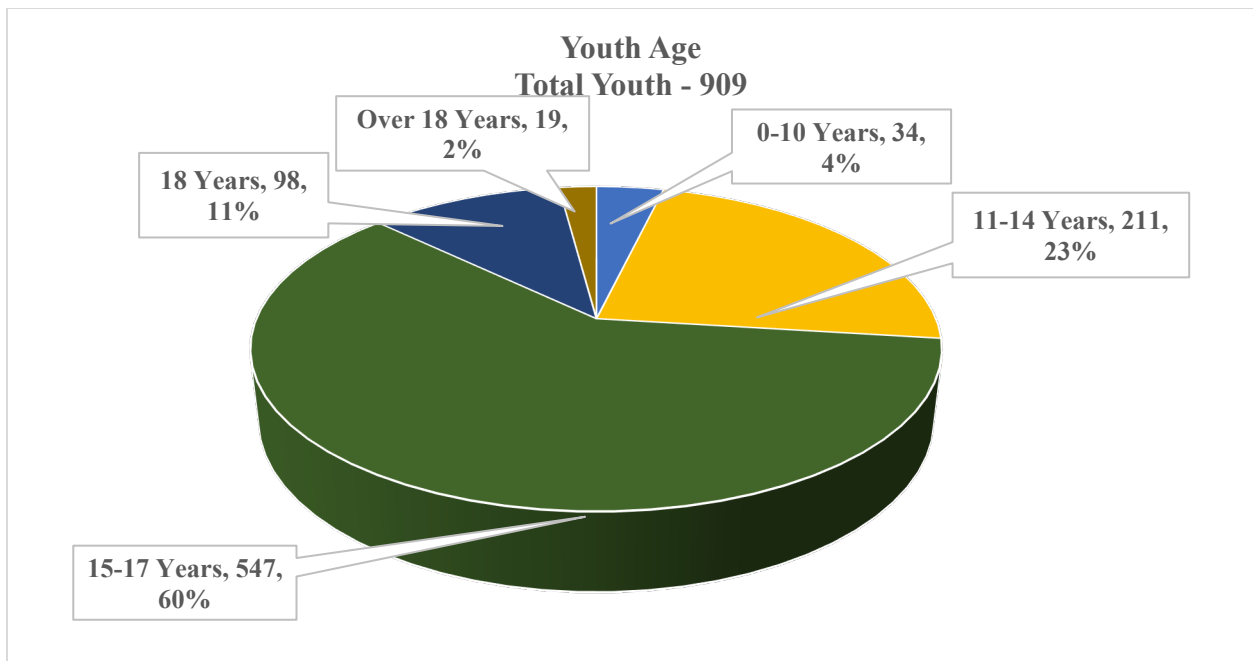


Although the youth reviewed sometimes had residential placements both in-state and out-of-state in 2023, the data above indicates where the youth was located related to the CANS that was used for analysis.

Gender

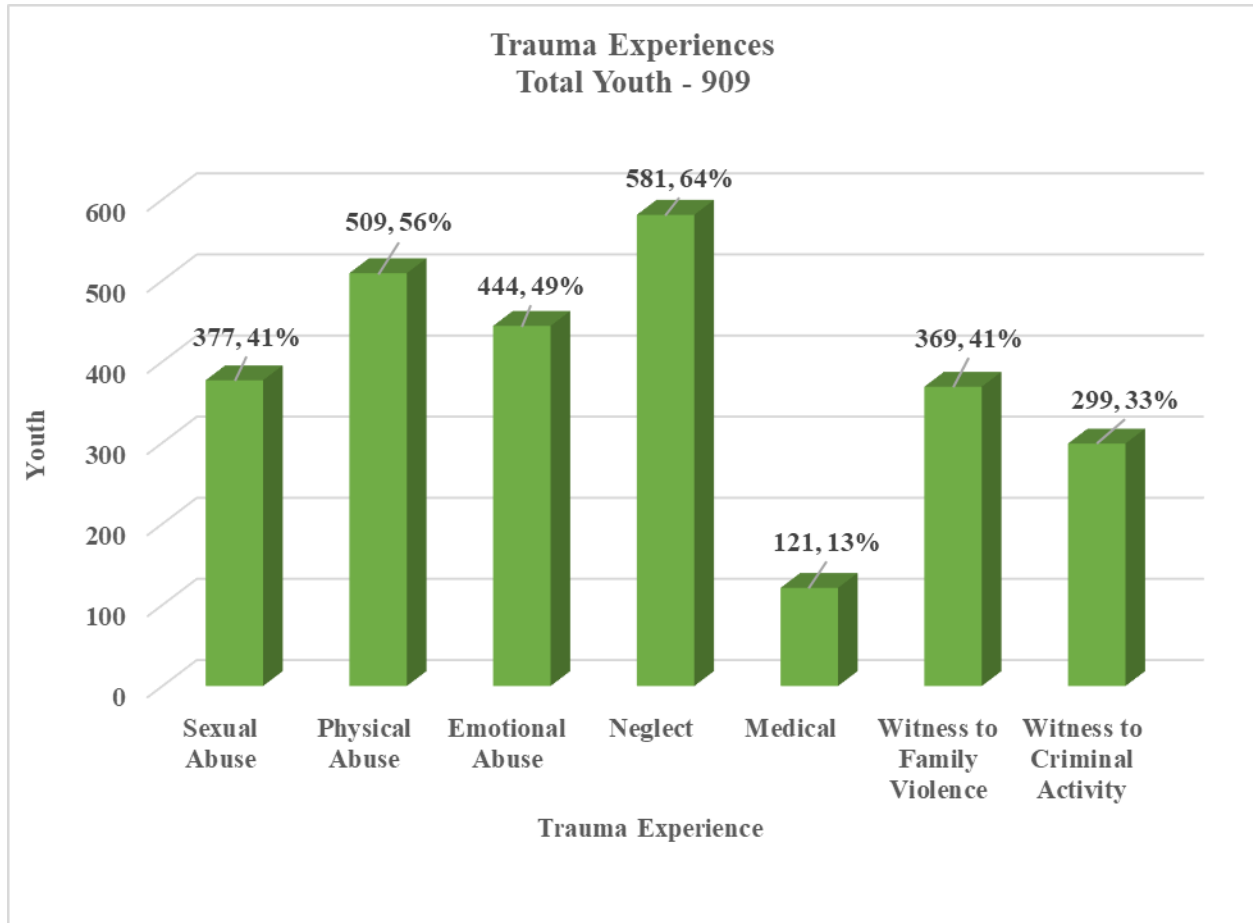


Age



Age was based on the age of the youth as of 11-29-2023. The majority (60%) of youth fall in the 15-17 years old range, with more males 348 (64%) than females 197 (36%), and 2 youth reporting gender as other, falling in this age range. Overall, there were more males (63%) than females (37%) in placement.

Trauma



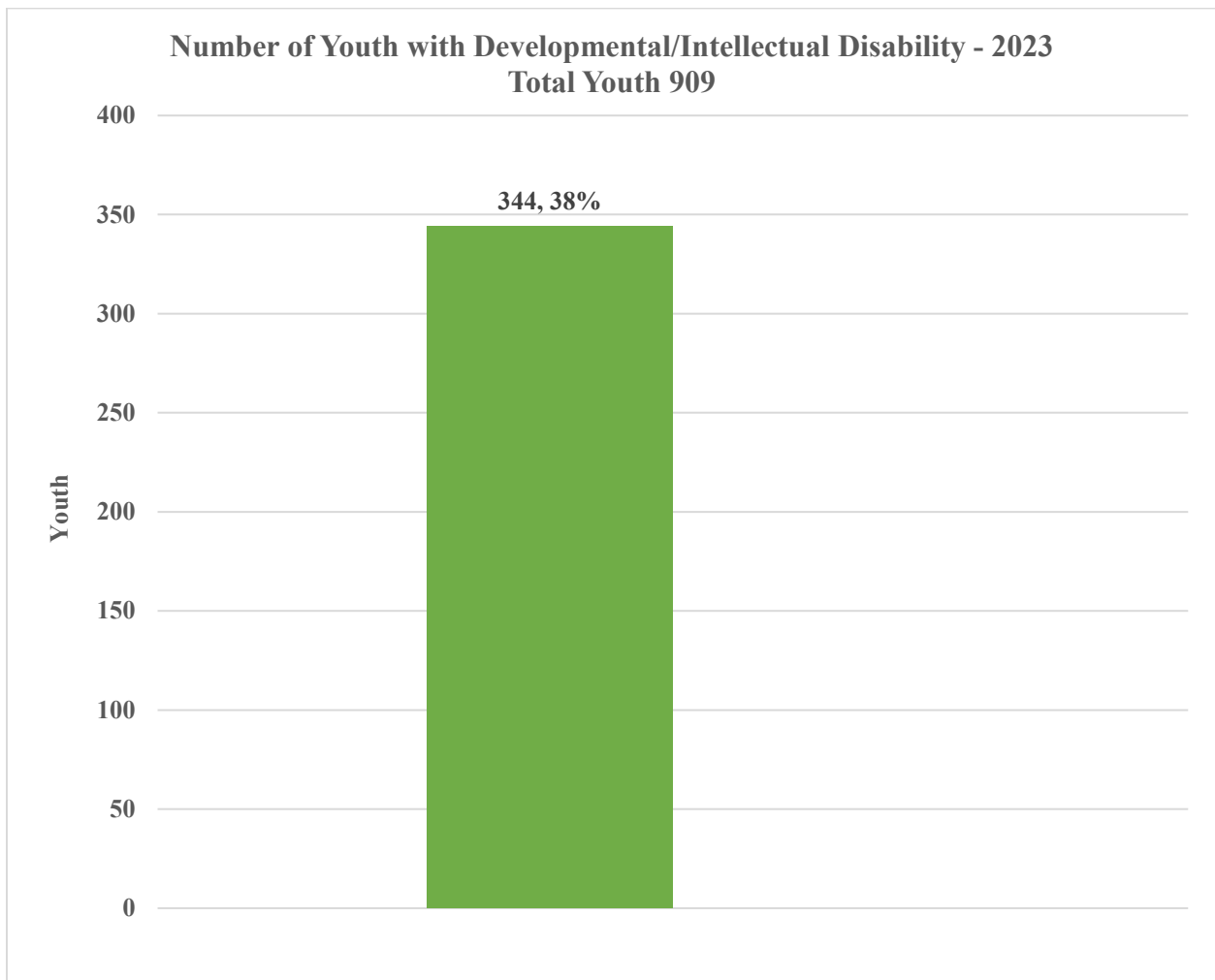
Trauma was reviewed through the Child Adolescent Needs and Strengths (CANS) tool. Youth with a rating of “1”, “2” or “3” are included in the chart above. In the latent class analysis only youth with a “2” or “3” are represented.

Out of the 909 youth reviewed, 784 (86%) of youth were reported as having at least one trauma incident indicated above.

The one area of trauma not reported above is disruption in caregiving/attachment losses. All youth in the review experienced at least 1 disruption in caregiving, for the simple fact they were in placement at the time of the review. Many experienced multiple disruptions, but this could mean that the youth moved from one family member to another or had multiple out of home placements, such as in foster care, group residential, etc.

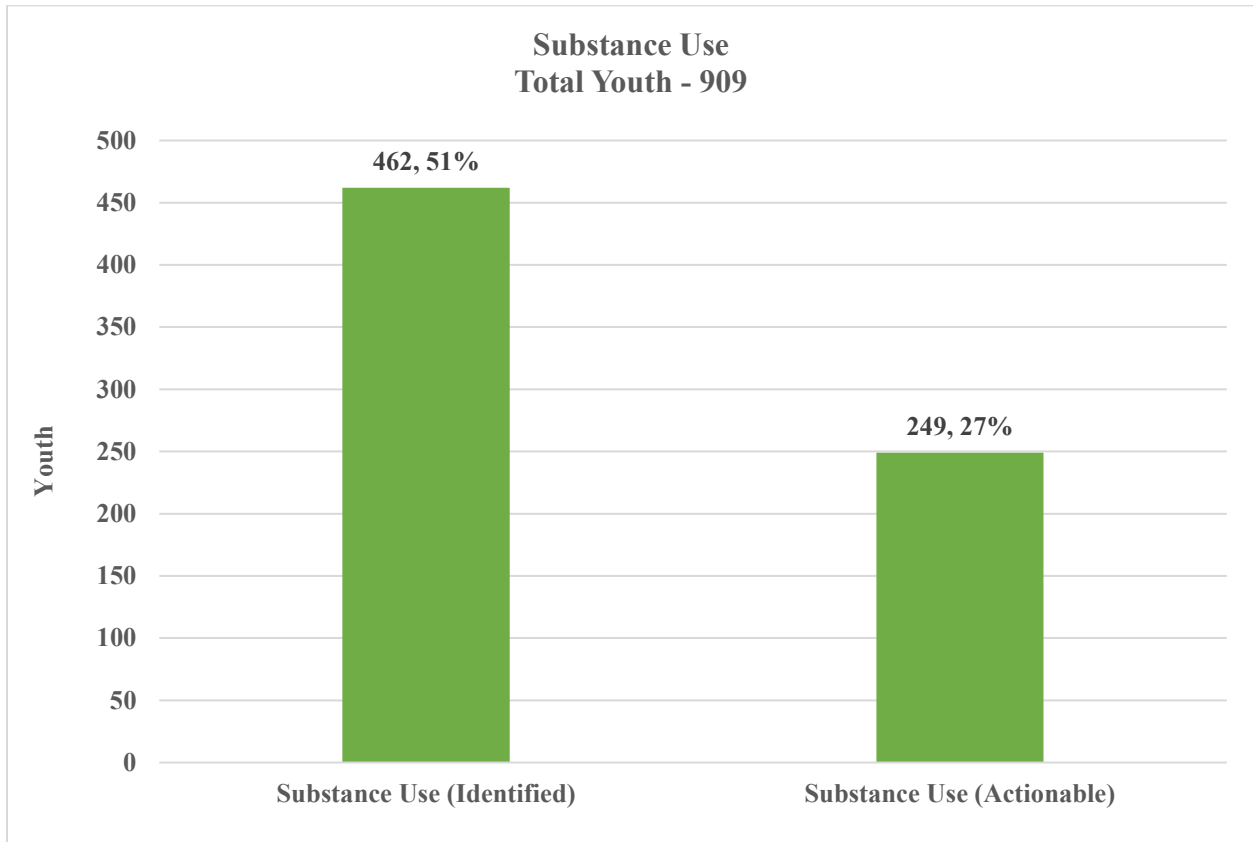
Youth with actionable trauma experiences and adjustment to trauma stressors are identified in Class 2 and Class 4 and will be described in that class.

Intellectual Disabilities



This number is based off the CANS item for Developmental/Intellectual Disabilities. It appears to be higher than expected with past reports indicating approximately 27% of the youth had an intellectual disability. This should be explored further by reviewing diagnosis and IQ levels to determine the severity of the disability. Sometimes this category will include learning disorders, which should not be included.

Substance Use



Substance Use was reviewed through the Child Adolescent Needs and Strengths (CANS) tool. Youth with a rating of “1”, “2” or “3” are included in the column above, as “Identified”. Youth who were determined to have a Substance Use issue that needed to be addressed are included in the column above, as “Actionable.” Out of the 909 youth, 462 or 51% of the youth were identified as having a possible substance use issue, but 249 or 27% of the youth were identified as needing treatment for substance use.

Substance use should be explored further to identify substances used by the youth and the severity.

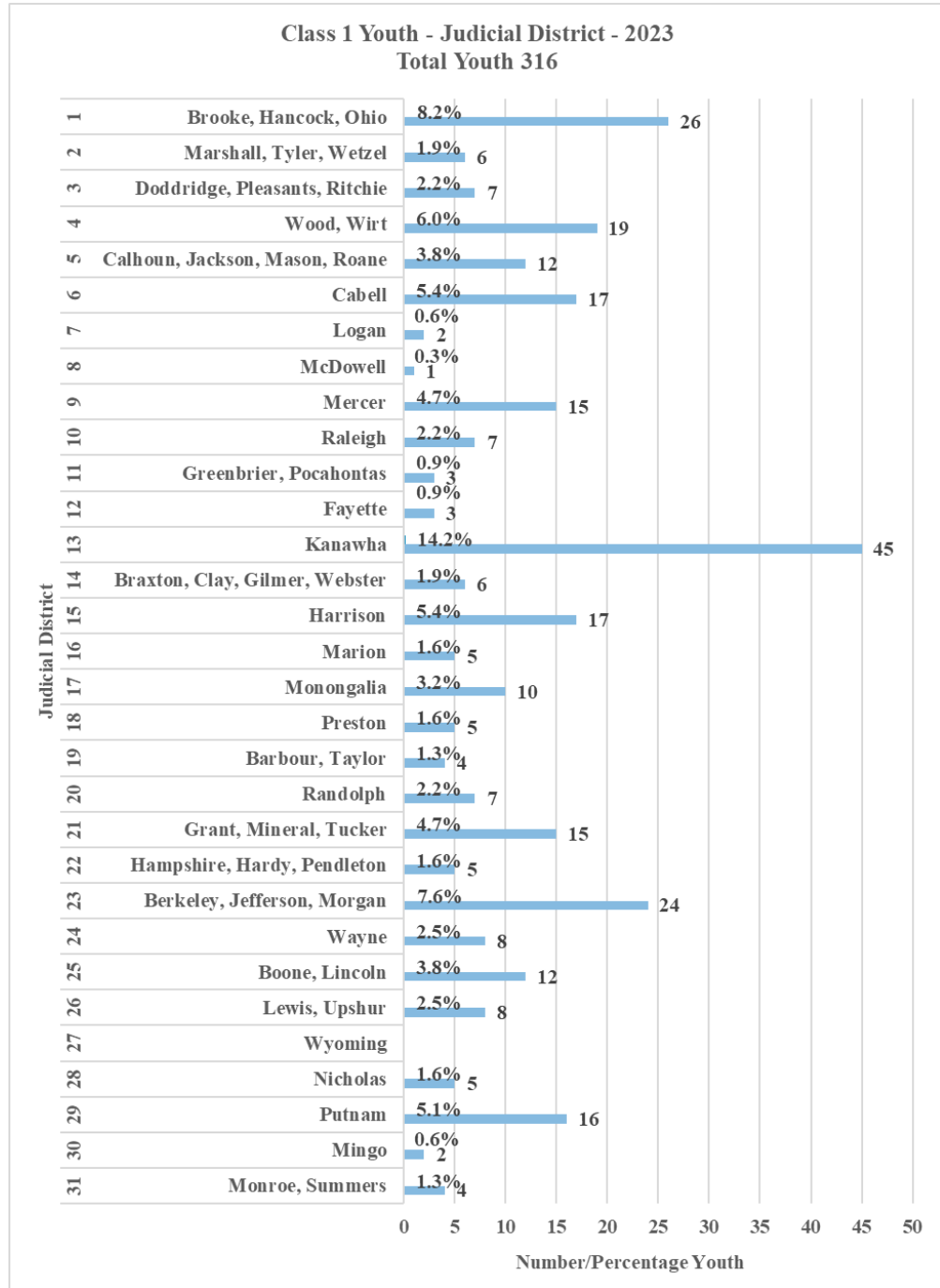
Youth with Substance Use needs are identified in class 3 and will be described in that class.

Appendix B

Class Demographics

Judicial Districts

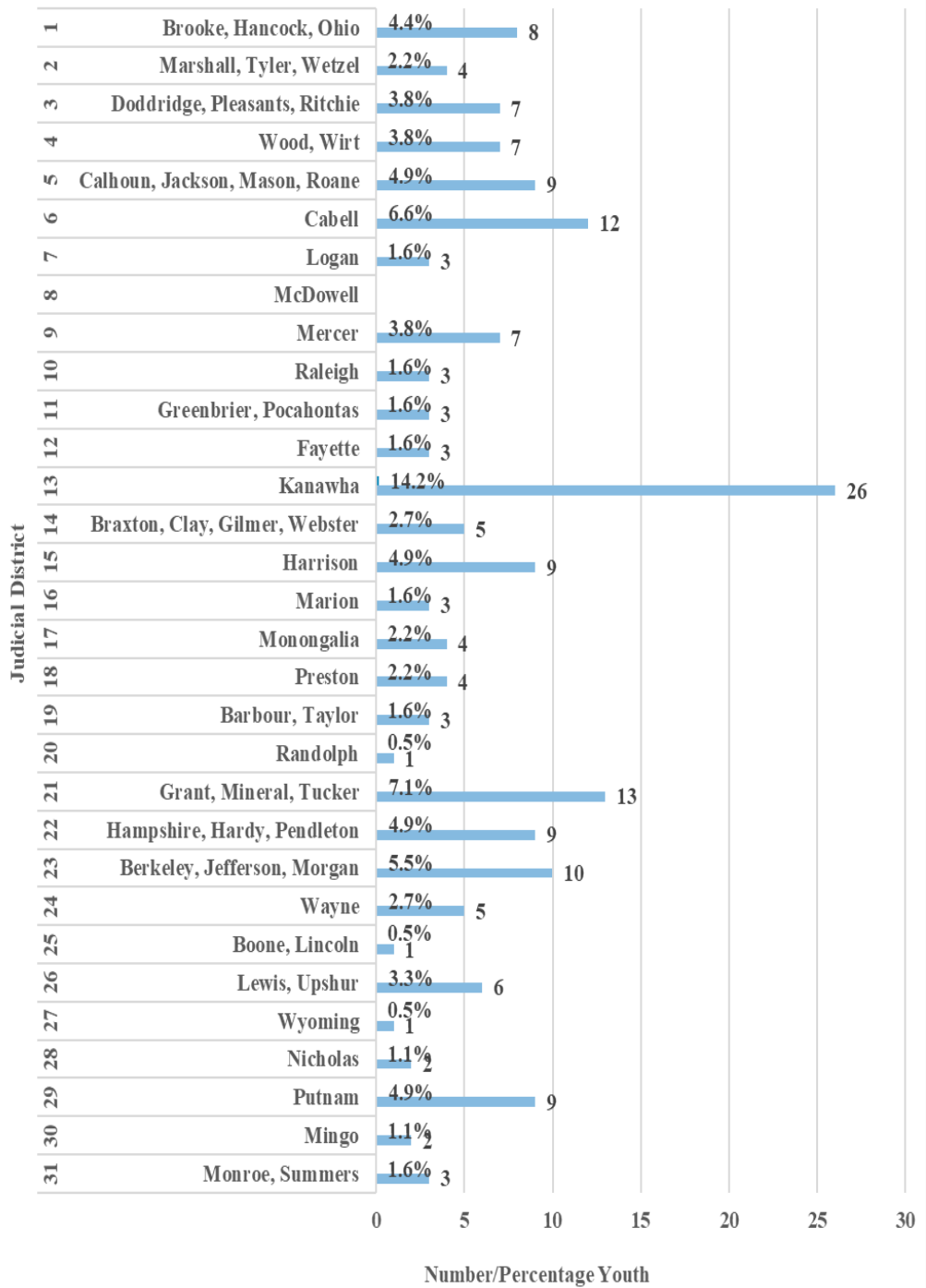
Class 1=Youth with Low Need/Legal



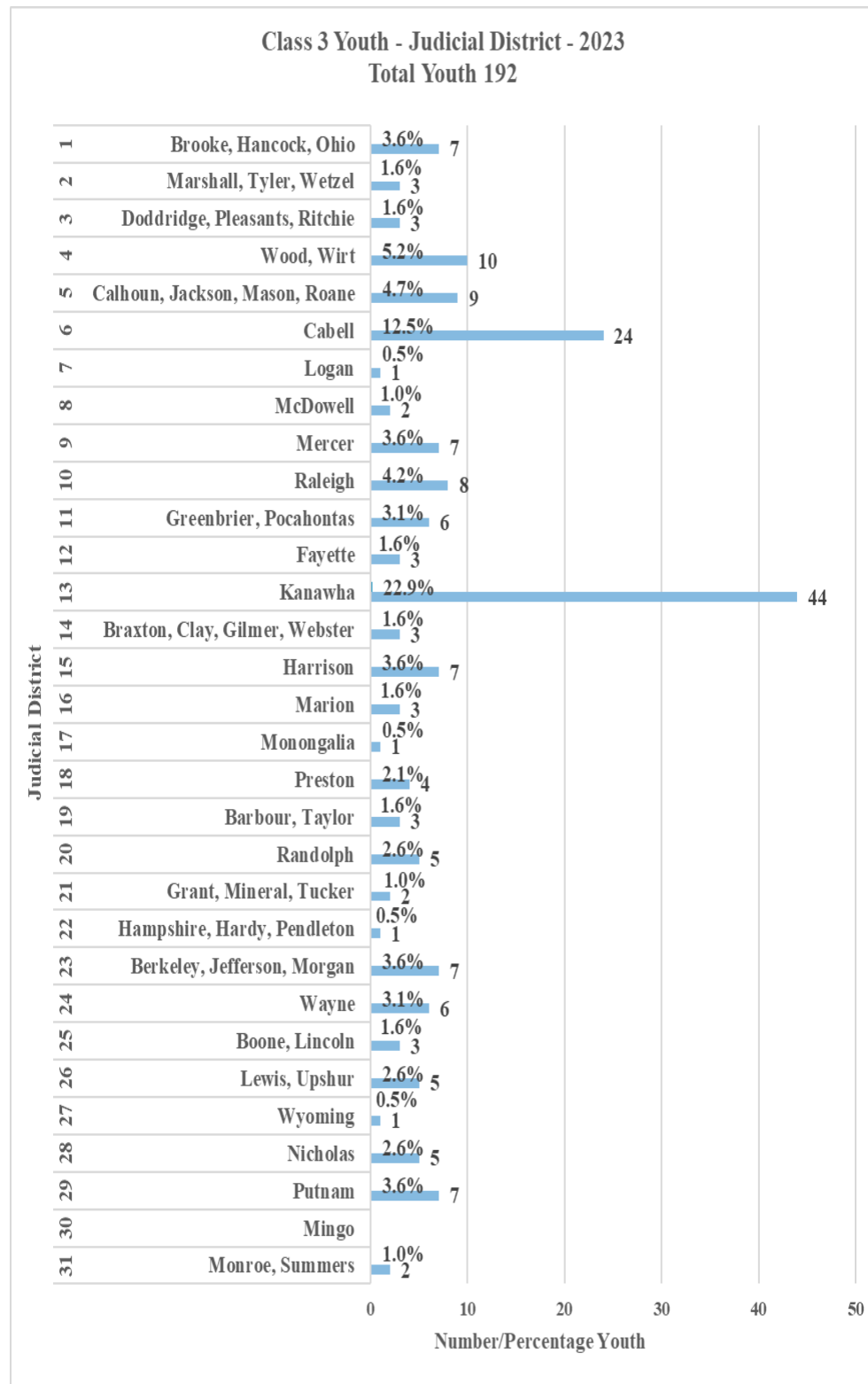
Class 2=Youth with Adjustment to Trauma and Mental Health Needs-No Aggression

Class 2 Youth - Judicial District - 2023

Total Youth 182

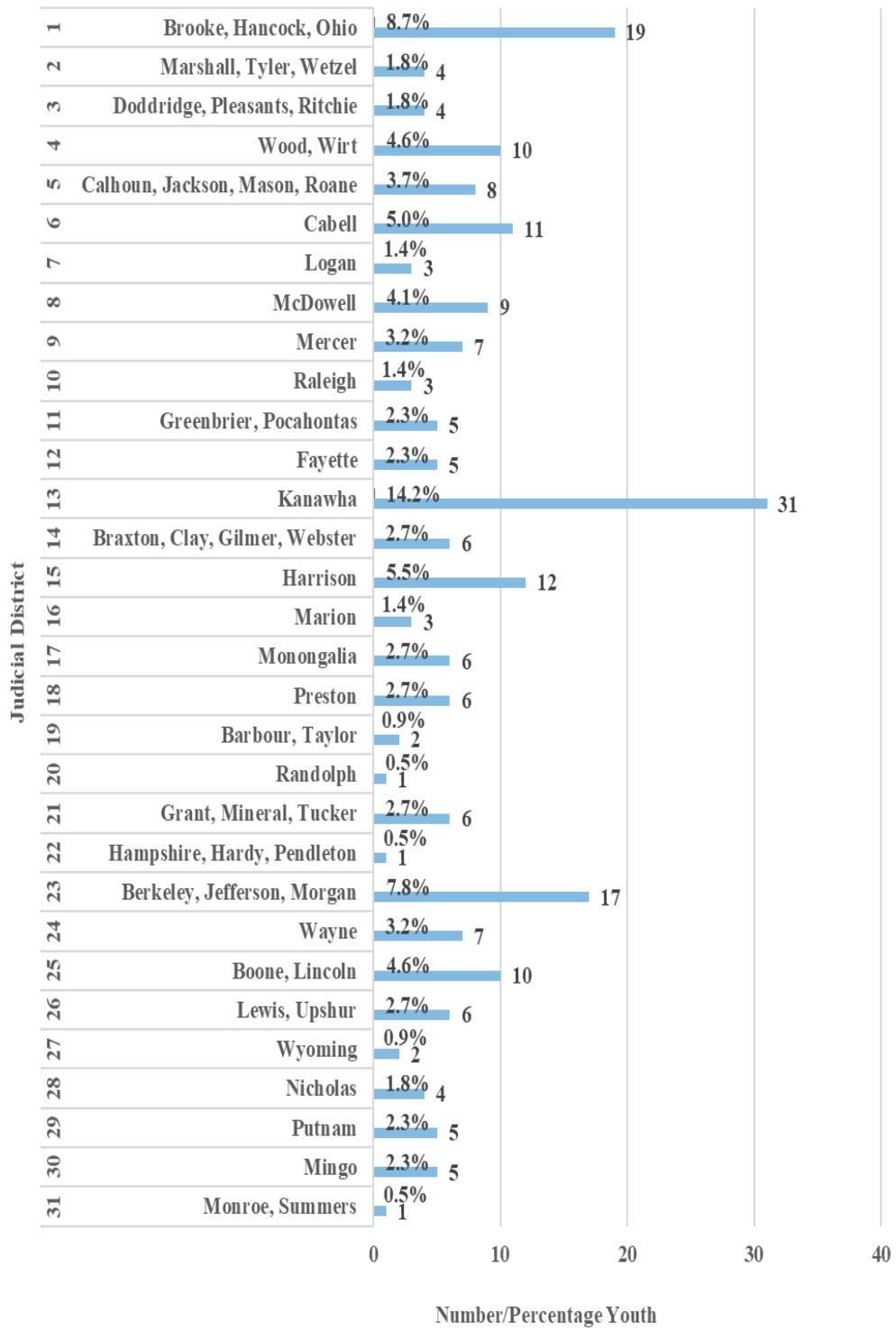


Class 3=Youth with Aggression, Special Populations, School Problems



Class 4= Youth with Adjustment to Trauma and Mental Health Needs-Aggression

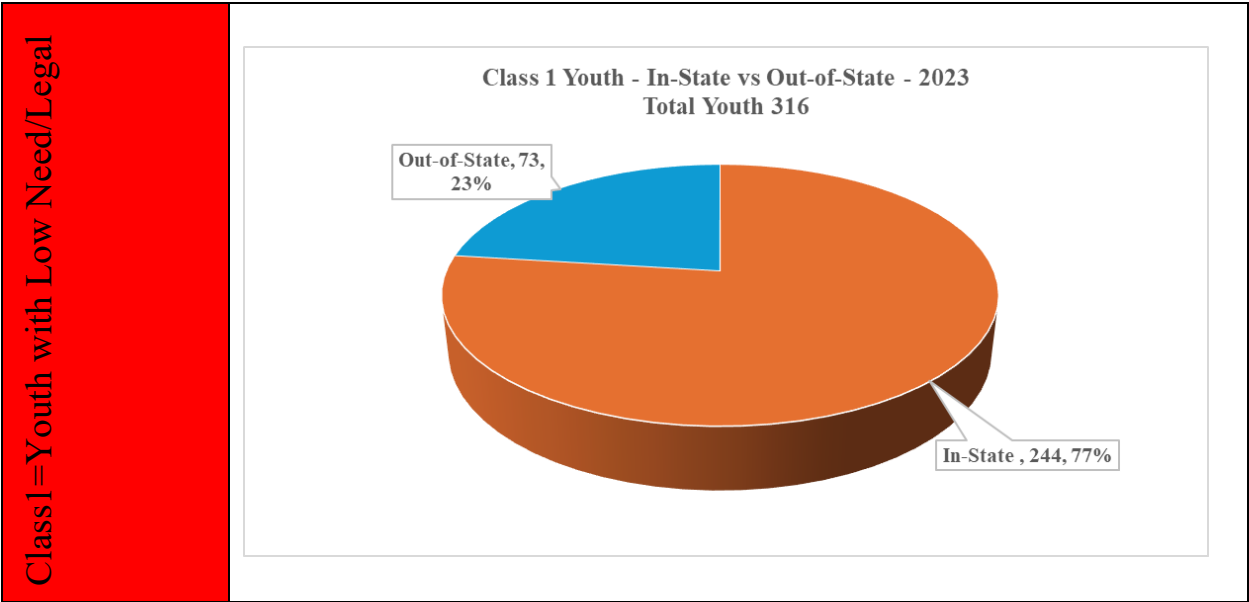
Class 4 Youth - Judicial District - 2023
Total Youth 219



Summary of Highest Number of Kids by Judicial District	Class 1- Youth with Low Needs/Legal	Class 2-Youth with Adjustment to Trauma and Mental Health Needs-No Aggression	Class 3-Youth with aggression, School Problems, Special Populations	Class 4-Youth with Trauma and Mental Health Needs- Aggression, Special Populations
	Kanawha-45 (14.2%)	Kanawha-26 (14.2%)	Kanawha-44 (22.9%)	Kanawha-31 (14.2%)
	Brooke, Hancock, Ohio-26 (8.2%)	Grant, Mineral, Tucker-13 (7.1%)	Cabell-24 (12.5%)	Brooke, Hancock, Ohio-19 (8.7%)
	Berkeley, Jefferson, Morgan-24 (7.6%)	Cabell-12 (6.6%)	Wood, Wirt-10 (5.2%)	Berkeley, Jefferson, Morgan-17 (7.8%)

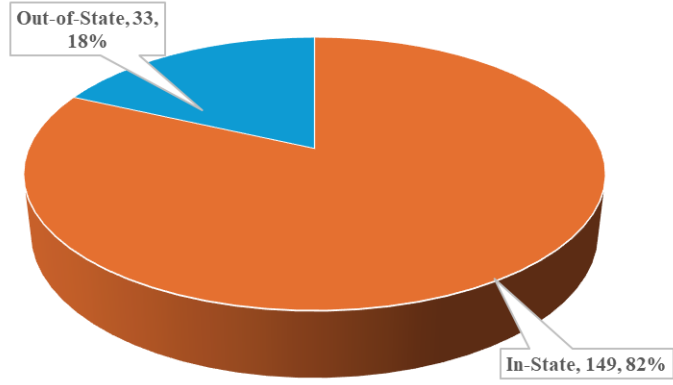
There may be a difference in the Judicial District’s numbers due to the availability of services in their area. This would need to be explored further by looking at what services each district used in this analysis.

Placement



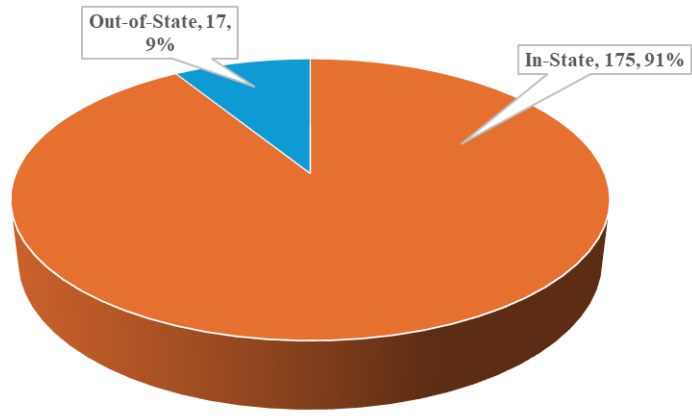
Class 2=Youth with Adjustment to Trauma and Mental Health Needs-No Aggression

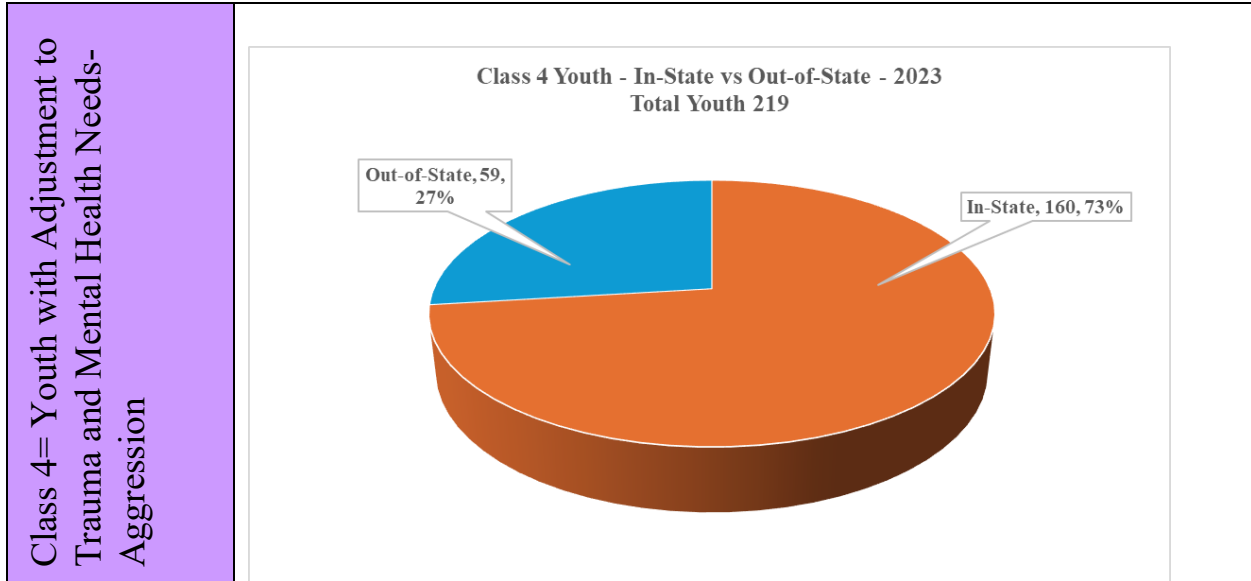
Class 2 Youth - In-State vs Out-of-State - 2023
Total Youth 182



Class 3=Youth with Aggression, Special Populations, School Problems

Class 3 Youth - In-State vs Out-of-State - 2023
Total Youth 192

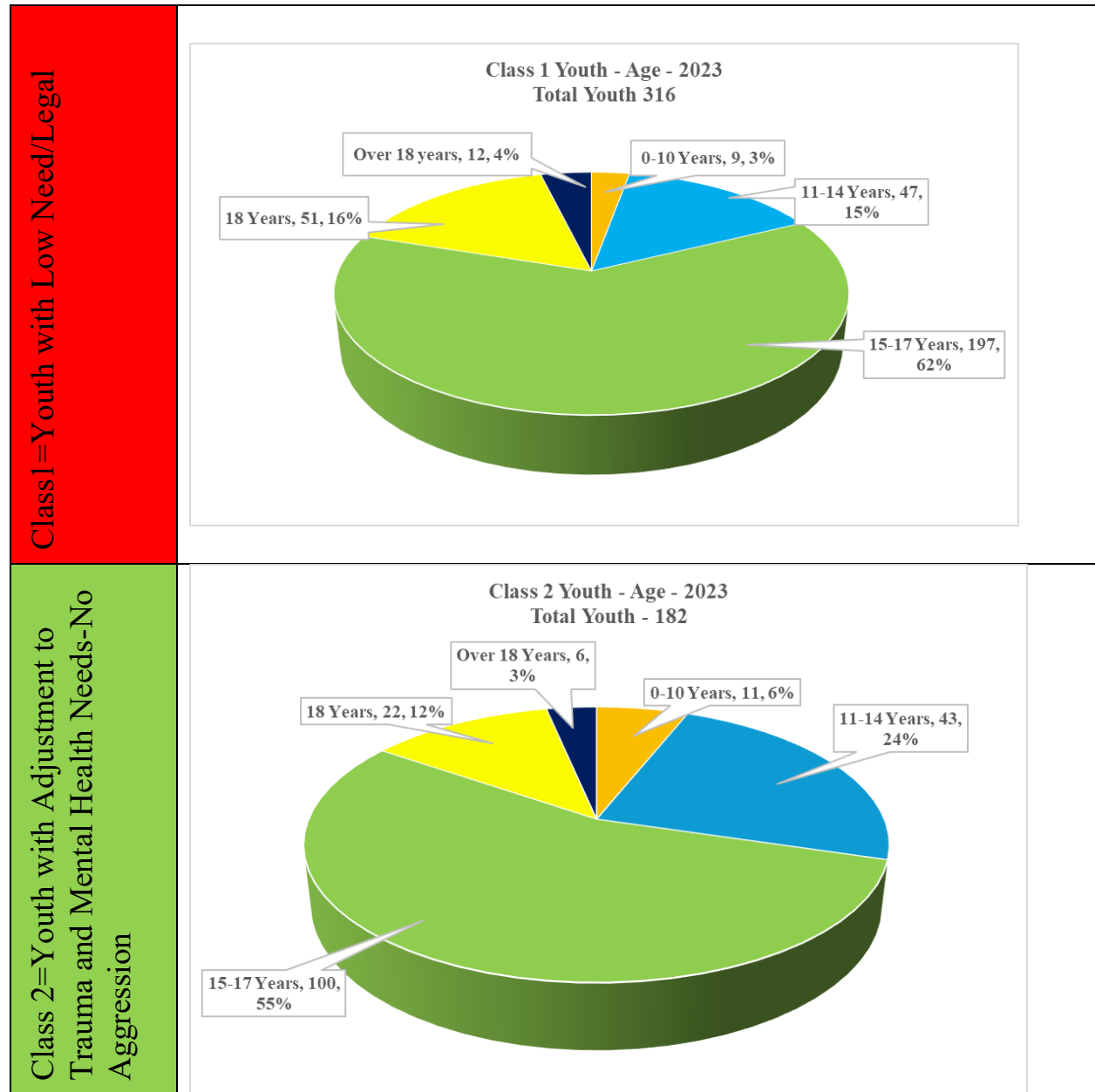




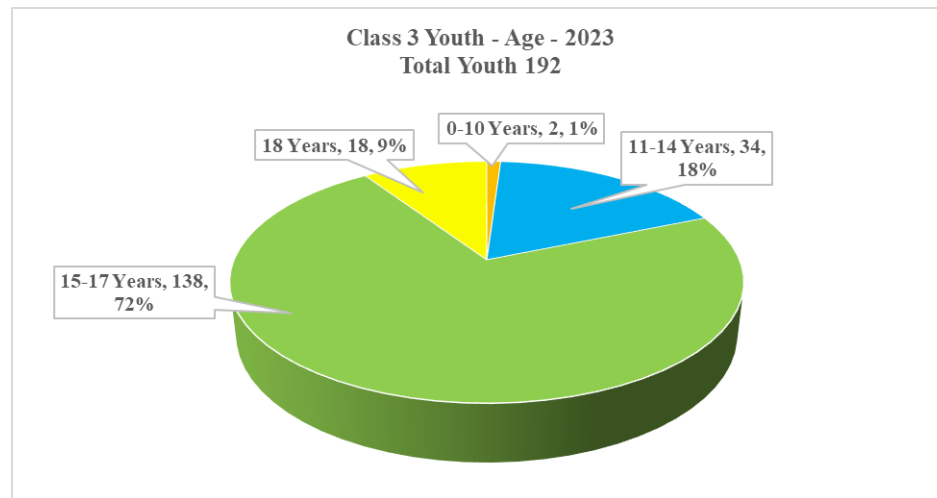
Summary of Youth In-State vs. Out-of-State	Class 1- Youth with Low Needs/Legal	Class 2-Youth with Adjustment to Trauma and Mental Health Needs-No Aggression	Class 3-Youth with aggression, School Problems, Special Populations	Class 4-Youth with Trauma and Mental Health Needs- Aggression, Special Populations
In-State	77%-244	82%-149	91%-175	73%-160
Out-of-State	23%-73	18%-33	9%-17	27%-59

The largest percentage of youth out-of-state are in Class 4. These youth have more needs, are aggressive and may have special needs related to intellect or sexually problematic Behaviors. The second largest percentage of youth out-of-state is for Class 1. These youth have the lowest needs and may not even meet criteria for residential services. In-state providers are taking youth in each class but are less likely to be able to handle youth in Class 4.

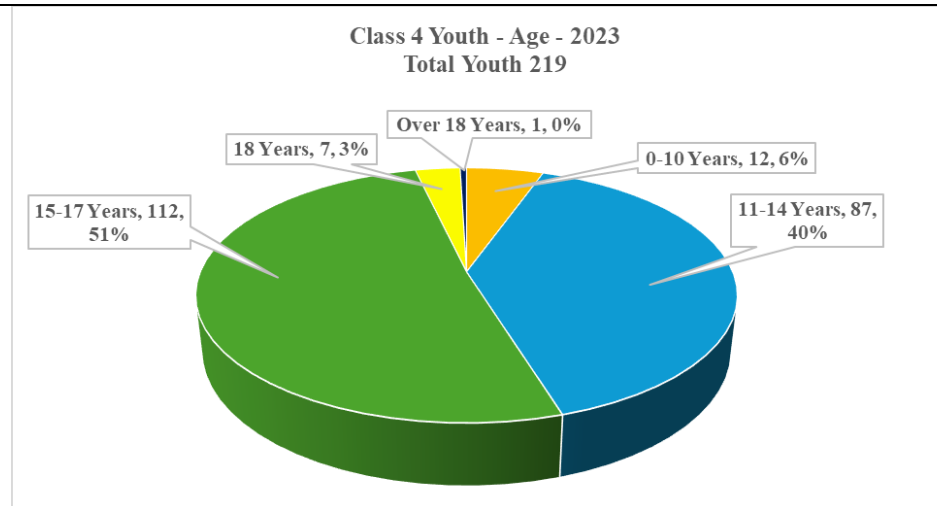
Age was based on the age of the youth as of 11-29-2023.



**Class 3=Youth with Aggression,
Special Populations,
School Problems**

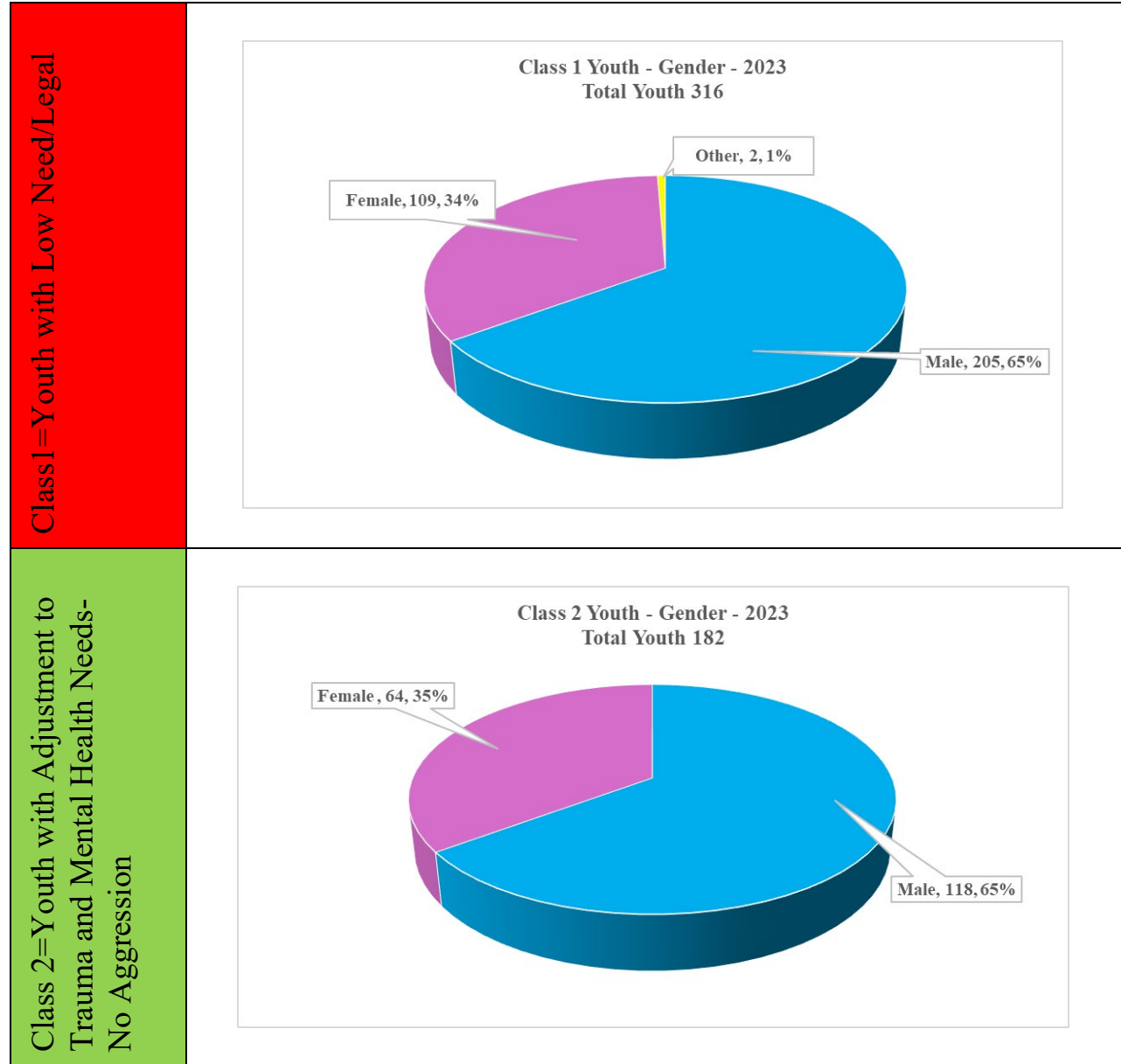


**Class 4= Youth with Adjustment
to Trauma and Mental Health
Needs-Aggression**

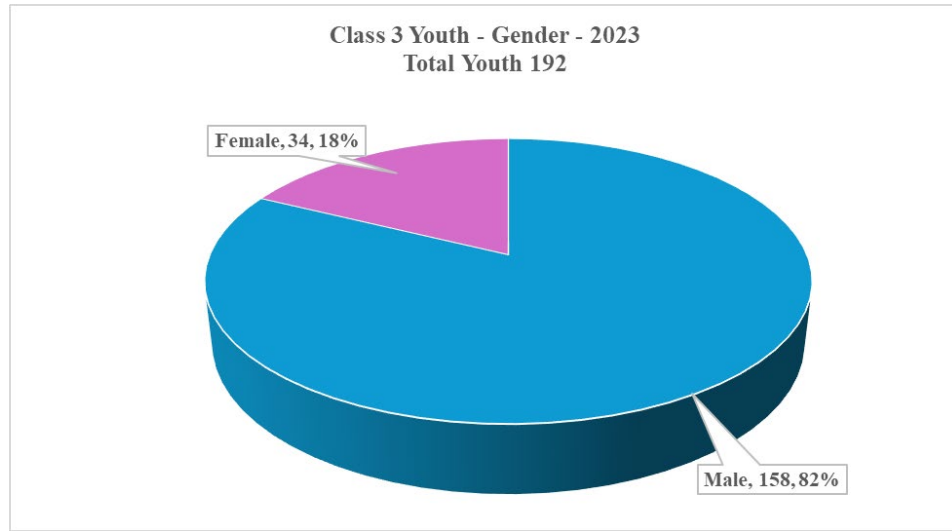


As would be expected youth ages 15-17 years old were the most prevalent in all classes. Young kids, ages 0-10 years old were less likely to occur in Class 3. Youth ages 11-14 years old were found to have the largest percentage in Class 4. This indicates that youth age 11-14 years old are showing aggressive behaviors which require more intensive treatment.

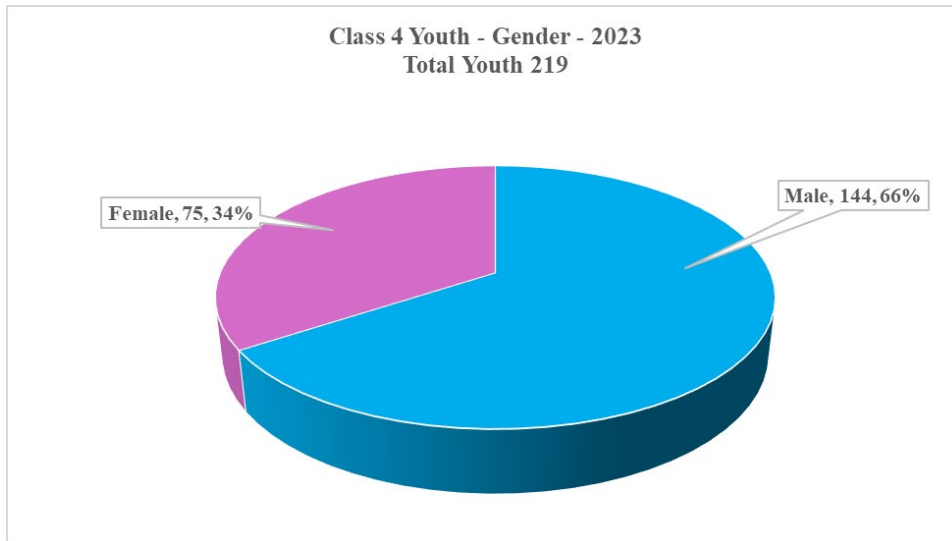
Gender



Class 3=Youth with Aggression,
Special Populations,
School Problems



Class 4= Youth with Adjustment to
Trauma and Mental Health Needs-
Aggression



Females are almost equally represented in all classes, except Class 3.

Appendix C

Child Adolescent Needs and Strengths (CANS) Items included in Analysis

Sexual Abuse
Physical Abuse
Emotional Abuse
Neglect
Witness to Family Violence
Witness/Victim to Criminal Activity
Medical Trauma
Trauma Stress-Adjustment to Trauma
Trauma Stress-Traumatic Grief
Trauma Stress-Re-Experiencing
Trauma Stress-Hyperarousal
Trauma Stress-Avoidance
Trauma-Dissociation
Trauma-Numbing
Family
Living Situation
Social Functioning
Daily Functioning
Developmental/Intellectual
Legal
Sleep
School Behavior
School Achievement
School Attendance
Attention/Concentration
Impulsivity
Depression
Anxiety
Oppositional Behavior
Conduct
Substance Use
Attachment Difficulties
Affect and/or Physiological Dysregulation
Anger Control
Suicide Risk
Non-Suicidal Self Injury
Other Self Harm
Danger to Others
Danger to Others
Sexually Abusive
Sexualized Behaviors
Delinquency
Runaway
Intentional Misbehavior

Appendix D

itemDom	class 1	class 2	class 3	class 4
Add	0.33	0.52	0.71	0.8
Adjusttraum	0.12	0.78	0.1	0.73
Anger	0.25	0.38	0.84	0.92
Anxiety	0.31	0.65	0.4	0.52
Attachment	0.04	0.18	0.06	0.41
Avoid	0.03	0.32	0.03	0.34
Conduct	0.22	0.19	0.69	0.48
Criminalact	0.13	0.29	0.1	0.29
Dailyfunct	0.04	0.05	0.07	0.24
Dangeroth	0.07	0.1	0.52	0.58
Delinquency	0.1	0.01	0.27	0.2
Depression	0.29	0.68	0.45	0.62
Devidd	0.11	0.13	0.27	0.37
Diss	0	0.09	0.02	0.11
Dysreg	0.07	0.24	0.14	0.56
Emotab	0.1	0.58	0.03	0.46
Family	0.37	0.62	0.74	0.86
Famviol	0.14	0.46	0.1	0.38
Hyperar	0.05	0.47	0.1	0.66
Impulsivity	0.24	0.46	0.84	0.89
Intentmis	0.06	0.06	0.18	0.4
Legal	0.6	0.33	0.81	0.46
Living	0.22	0.24	0.9	0.75
Medtrauma	0.02	0.05	0.04	0.09
Neglect	0.28	0.71	0.23	0.67
Nonsuic	0.03	0.1	0.04	0.15
Numbing	0.02	0.09	0.01	0.21
Odd	0.33	0.38	0.91	0.8
Otherselfh	0.02	0.01	0.03	0.09
Phyab	0.18	0.63	0.15	0.62
Reexper	0	0.35	0.03	0.32
Runaway	0.09	0.06	0.27	0.22
Schach	0.2	0.22	0.58	0.47
Schatt	0.12	0.14	0.57	0.22
Schbehav	0.14	0.1	0.88	0.68
Sexab	0.15	0.59	0.06	0.33
Sexualbeh	0.04	0.03	0.03	0.16
Sexuallyabus	0.03	0.04	0.02	0.07
Sleep	0.1	0.24	0.28	0.4
Social	0.13	0.33	0.7	0.84
Substance	0.21	0.12	0.57	0.24
Suiciderisk	0.01	0.08	0.05	0.1
Tragrief	0.04	0.38	0.07	0.31