Outcome Assessment for 2021

Jasper Mountain Psychiatric Residential Program
March 2022

Introduction

Since 1998 Jasper Mountain has conducted comprehensive outcome assessment of the children in its programs. The two primary outcome assessment components are pre and post testing while in the program, and follow-up data collection after discharge for up to five years which reflects the progress a child has continued to make far beyond the conclusion of treatment. Follow-up data is presented in a separate report. This report focuses on the pre and post testing results of the 20 children who discharged from Jasper Mountain in 2021 with some reference to the now 336 children discharged since 1998. Never before in our history at Jasper Mountain have we discharged such a high number of graduates as we did in 2021. This is due to the existence of Crystal Creek for the first 6 months of 2021. Annually in March an Outcome Assessment Report will be issued to report on results from the prior year.

Executive Summary

This summary concerns the children discharged from the intensive residential treatment program during 2021. The following results were seen in the 20 graduates using pre and post measures this year:

- Overall there was a 38% average improvement in attachment disorder for this cohort, and a 32% average improvement for the group among this cohort that entered in the most severely attachment disturbed range.
- There was 65% average improvement among this cohort on their clinical treatment objectives.
- There was a 58% average improvement among this group on their most serious behaviors and 85% of these graduates went into a family setting after treatment.
- As measured by the CAFAS there was a 47% average improvement in functioning among this group of graduates.
- Looking at 19 years of CAFAS data showed us that the average improvement rates keep climbing despite the population we treat being more impaired with an overall average score improvement totaling 40%.
- In the past 10 years of CAFAS data, average CAFAS scores upon discharge have improved by 45%.
- A full 60% of our graduates in 2021 dropped an entire level of care, no longer requiring residential treatment or hospitalization.

The Importance of Outcome Data

Outcome data essentially indicates the changes that occur during the process of the treatment program. While useful, outcome data does not say if the changes are

temporary or lasting, for this purpose a longitudinal follow-up study is needed. If long-term and short-term data sets are compared, it is easy to see that lasting changes are of more practical importance than short-term changes. However, it is extremely unlikely that lasting changes are possible without the foundation of initial changes. Because of this, and the ability to identify improvement of children in a particular year, outcome data is very important.

Another reason outcome data is important is to determine if the treatment program is in fact accomplishing what it intends to accomplish during the time the child is in residence. Based upon the answer to, 'Do children in the program improve over time?' decisions can be made to improve specific aspects of the program. The best outcome data is a comparison of two snap shots--at the point treatment begins and again when it ends. The difference between the two measures indicates changes the child has made during treatment.

The third value of outcome data is to consider the current cohort of children served compared to previous years' cohorts. In this regard the trends in the children can be explored over many years.

A Caveat on Outcome Data

It must be mentioned that all changes made by children cannot be immediately attributed to the treatment provided. Particularly with young children, there is a developmental or maturational expectation that the learning curve of young children is greater than for other periods of life. This is one reason that treatment can be most efficient (highest return for the investment) at younger developmental ages. Maturation indicates an expectation that some children would have matured even without treatment. An experimental research design with tightly controlled variables and random assignment would be necessary to indicate exactly what caused the changes. Such a design is impractical with the multitude of intervening variables in residential treatment. With such a research design, there would need to be a control group and random assignment of children to our program and with other emotionally disturbed children who would intentionally receive no treatment. This creates ethical problems denying children who seriously need treatment from obtaining it just so a research project can be conducted. The agency has opted to collect outcome data that can measure the changes themselves without definitively identifying the cause of the changes. This type of design is called Outcome Assessment and is a recognized approach in the outcome literature. Our priority is to help children heal and grow regardless of whether we can take any specific credit for the improvement.

Types of Data Used

We have used three types of data or observations of change in this assessment.

1. Quantified standardized data
2. Personal subjective judgments
3. Objective behavioral tracking

One or more of these approaches is commonly used in outcome studies, with the most complete assessment coming from a combination of all three. All three have something to add to the reflection of changes the child has or has not made during treatment. Multiple sources of data and observers can provide a more complete picture.

One of the unique aspects of our agency's outcome study is the child has an opportunity to contribute to the process and provide a subjective point-of-view. The child's observations of himself or herself and the observations of parents and the clinical team are all combined to present the fullest picture possible. We have quantified all aspects of the outcome data to enable measuring various important objectives of treatment.

Assessment Measures Used

We used the following seven standardized, subjective judgment, or behavioral tracking for the 2021 outcome data:

- Attachment Disorder Assessment Scale--Revised (Ziegler, 2006). This standardized scale has been used for two decades and recently published with the results of independent psychometric research from six states. It has been shown to be useful in determining the presence and severity of attachment issues.
- Child and Adolescent Functional Assessment Scale/CAFAS (Hodges, 1990). This is a standardized assessment instrument to determine the level of functioning in multiple areas of the child's life including home, school, community, behavior, emotions, and others.
- Child and Adolescent Service Intensity Instrument/CASII (AACAP, 2005) This measure of mental health acuity has been chosen by the State of Oregon to help determine the level of need for treatment intensity.
- Clinical improvement data. Therapists' subjective observations of improvement on each measurable treatment objectives on the child's treatment plan.
- LaneCare Clinical Evaluation Instrument (Scheck, 2000). This is a standardized assessment instrument that reflects the overall psychiatric and behavioral functioning of the child in sixteen domains.

- Maladaptive Behavior Rating Scale. Expanding upon the State of Oregon Level 5 Criteria, this objective behavioral tracking instrument identifies twelve of the most disruptive behaviors seen in the population of children coming into residential treatment and has been used since 2019.
- Personal Inventory of Kid's Optimal Capacities (PIKOC) (Ziegler, 1998). This scale allows children to assess their own development in multiple areas of skills and capacities.

- In 2021, we did not evaluate outcomes using the Vineland-3 having noticed that results varied far too widely to be rendered useful. Later in 2022 we will return to the use of this instrument with a process in place to control for widely varying methods of interviewing and inexperience with scoring to minimize these problems.

Results per Assessment Measure

The Attachment Disorder Assessment Scale-Revised/ADAS-R

Assessing the severity of attachment problems using the ADAS-R involves consideration of the child's *developmental history*, their *quality of relationships* with others and their *problematic behaviors*. In considering these results it is important to keep in mind that of the three areas that determine the child's score, one does not change -- the child's *developmental history*. Therefore the gains we see came from positive changes in the child's behavior and quality of relationships. Our experience with improvements in attachment contradict some who say that children with attachment disorders are not amenable to residential treatment. In our treatment environment we find the largest improvement in this area.

In scoring the ADAS-R, scores between 60-80 are considered indicative of Significant Attachment Disorder; scores between 40-59 Moderate Attachment Disorder; scores between 25-40 Attachment Problems, and scores below 24 indicate Minimal Attachment Issues.

Average ADAS-R Improvement			
Year	**Pre Avg**	**Post Avg**	**% Improvement**
2021	48	30	38%
% Improvement in Significant Attachment Disorder group			**32%**

Discussion:
In 2021 at intake, seven children scored with Significant Attachment Disorder and at discharge, only one child scored at that level of severity. This data suggests that among

the most attachment disordered group, significant progress was made to improve their attachment disorder issues. As the reader can see, the average pre-test score for 2021 graduates was 48 (moderate attachment disorder) and the average post-test score was 30 (attachment problems).The entire group of graduates in 2021 improved remarkably in overall scores on the ADAS-R.

The Child and Adolescent Functional Assessment Scale/CAFAS

The State of Oregon uses the Child and Adolescent Functional Assessment Scale to track the progress of its children and youth in residential treatment. Jasper Mountain reports our pre and post-test CAFAS scores to the state every month. The instrument measures impairment ranging from none/minimal to severe impairment on each of 8 subscales. The higher the score, the more severe the impairment. The highest score possible using these 8 domains is 240. If we remove the Substance Use domain which rarely if ever applies to our population, the highest possible score would be 210. Here are the 8 subscales scored:

- School/Work Role Performance
- Home Role Performance
- Community Role Performance
- Behavior Toward Others
- Moods/Emotions
- Self-Harmful Behavior
- Substance Use
- Thinking

Average CAFAS Improvement			
Year	**Pre Avg**	**Post Avg**	**% Improvement**
2021	147	64	56%

19 Years of CAFAS Data																			
	2003	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**
Pre	86	84	90	103	121	135	154	140	144	145	154	156	146	155	156	156	151	149	147
Post	68	**53**	57	68	77	91	95	100	108	83	86	86	101	82	81	83	83	64	64
% I	21%	37%	37%	34%	36%	33%	38%	29%	25%	43%	44%	45%	31%	47%	48%	47%	45%	57%	56%

Discussion:

2021 saw significant levels of improvement as measured by the CAFAS as has been the trend since 2012. From 2003 to 2008, the average intake CAFAS score was significantly lower (103) than in the 13 years that followed 2009 to 2021 (150). This data confirms that the children referred to residential treatment on average were increasingly more disturbed after 2008. It was in 2008 that Managed Care started in Oregon which led to

more stringent criteria for determining a child's level of care needs. Only the most disturbed children were referred for residential levels of care from 2008 onward.

Looking at average improvement percentages per year since 2003, one can see that 100% of the children saw at least 21% improvement in their CAFAS score with the overall 19-year average being 40% improvement. One can also see that average improvement scores increased significantly starting in 2012. The average improvement percentage for the 10 years from 2002 to 2011 was 32%. In the 10 years from 2012–2021 inclusively, the average improvement rate jumped to 46%. The data suggests that the program got better at improving the disturbed behaviors of children even while the level of disturbance had increased substantially.

Child Assessment of Service Intensity Instrument (CASII)

Psychiatrists from the American Academy of Child and Adolescent Psychiatry developed this instrument in 2005 to determine the intensity of treatment the child or youth requires. It was developed specifically with managed care in mind to provide entities with a way to measure required levels of care in normed and validated manner across the country. It was included in our outcome measurements since the formation of LaneCare, our first local managed care entity which began in 2008. The highest score possible on the CASII is 35. The instrument rates level of impairment in each of the following six domains:

- Risk of Harm
- Functional Status
- Comorbidity
- Recovery Environment Stressors
- Recovery Environment Supports
- Resiliency and Treatment History
- Acceptance and Engagement in Treatment

Average CASII Improvement			
Year	**Pre Avg**	**Post Avg**	**% Improvement**
2021	26	16	38%

Discussion:
100% of the 2021 graduates improved on the CASII measurement. The average CASII score at intake was 26 indicating the need for staff-secure residential treatment and the average score at discharge on the CASII was 16 indicating the need for only intermittent outpatient services to support the child's needs.

Expanding on CASII Results: Pre and Post Level of Care Assessment

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In 2019 this table was added to visually represent the substantial changes in level of care required for our graduates after treatment compared to intake.

LEVEL OF CARE	DESCRIPTION	CASII Score	2021 Pre	2021 Post
0	Basic prevention	7-9	0	0
I	Recovery maintenance	10-13	0	6
II	Intermittent outpatient	14-16	0	5
III	Regular outpatient	17-19	0	4
IV	Intensive outpatient	20-22	1	3
V	Staff-secure 24-hour psychiatric residential	23-27	15	2
VI	Locked 24-hour psychiatric residential	28-35	3	0

Discussion:
Upon intake, 100% of the children in 2021 scored at Level IV or higher on the CASII. At discharge 100% dropped at least one LOC; 23% dropped 2 LOC's; 46% dropped 3 LOC's, and 1% dropped 4 LOC's. For 100% of those children, Level IV (ICTS Outpatient) services had already been tried and had failed to remediate their most serious problems.

Placement upon Discharge

In 2019 this table was added to tell the story of where our graduates go immediately after graduation. For this purpose, home means the child's adoptive or birth parents' home, foster home means regular or treatment foster care, group home depicts a BRS program consisting of a small, staffed program typically based in a residential sector, and facility describes a residential program whether short or long term. When a graduate of Jasper Mountain has to go to another facility this is termed a "lateral move." Lateral moves are only done when the graduate has been unable to improve enough in violent, sexualized, or self-harming/suicidal acting out to be able to live in a less restrictive setting.

Number of Graduates per Type of Placement					
Year	Total grads	Home (bio or adopt)	Foster Home	BRS Group Home	Facility
2021	20	12	5	1	2

Discussion:
In 2021 85% of our graduates moved on to family settings, as opposed to a BRS group homes or facilities. Follow-up data will tell the story of whether those children who were able to maintain in that level of care. 15% required a group home or facility placement upon discharge. In 2021 there were two children who required a lateral move

in 2021 to another facility and in both of those cases the children had significant residential treatment prior to coming to Jasper Mountain.

Clinical Improvement Data

This is the data that is most specific to the individualized treatment issues of each child. Improvement on clinical treatment issues rounds out the outcome data by adding the opinion of the clinician who is responsible to develop, implement, and evaluate the treatment plan. Because treatment issues go right to the heart of the child's problems, they can be some of the more difficult improvements for the child to make.

Average Clinical Improvement in 2021
65%

Discussion:
Each of the treatment goals was assessed for the percent of improvement based on the measurable objectives in the child's treatment plan. Each child's treatment issue scores were averaged, as were the average overall scores for each child's clinical improvement. The result was significant improvement across the board in clinical treatment areas. Since treatment issues are honed over time leaving only the most challenging issues for the child to work on, 60% improvement is considered an excellent result.

The LaneCare Clinical Evaluation Instrument/LCEI

The fourteen domains the LCEI measures are:

- Hospitalizations/crisis stays
- Psychiatric medications
- Behaviors in past one month
- Severity of symptoms in past one month
- Intensity of service need/professional support
- Symptom or stress-management capacity
- Duration of symptoms at initial completion
- School behavior problems
- Activities of Daily Living (ADL's)
- Quality of family support system
- Quality of community support system
- Self-Efficacy/goal directedness

Average LCEI Improvement			
Year	**Pre Avg**	**Post Avg**	**% Improvement**
2021	42	26	38%

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Discussion:
The highest possible (most severe) score on the LCEI is 60. In 2021, out of the twenty graduates, 100% demonstrated improvement on the LCEI. The overall result was that the program's residents exhibited substantial psychiatric and behavioral problems at the beginning of treatment and significantly less so at the end.

Maladaptive Behavior Rating Scale

This tool expands upon the Level 5 Criteria for the State of Oregon and rates twelve of the most serious behaviors which have led to admission into residential treatment using The MBRS addresses 12 serious behaviors while the Level 5 Criteria consisted of 8. The Level 5 addressed the same 5 serious behaviors covered by the MBRS (aggressive/assaultive; sexual behaviors/offenses; suicidal/depressed; self-abuse; and firesetting) but did not address defiance, lack of attachment/remorse; soiling/smearing, urinating outside of the toilet; running away; property destruction; or stealing and lying all of which are important to families who take these children. The Level 5 addressed psychotic behavior and developmental disability but those are rarely issues we face in our particular population and they are also issues which generally do not change despite treatment. The Level 5 consistently produced higher scores than the MBRS because it did not address a wide range of serious behavior issues we believe are important to include. The following behaviors are rated on the MBRS using a 0-3 scale (0=none, 1=mild, 2=moderate, 3=severe):

- Aggressive/assaultive
- Sexual behaviors/sexual offenses
- Suicidal threats or attempts/depression
- Self-harm behaviors
- Defiance/non-cooperation
- Lack of attachment/remorse
- Soiling/smearing
- Urinating outside of toilet
- Running away/unaware of danger
- Property destruction
- Fire setting/fire fascination
- Stealing/lying

Average MBRS Improvement			
Year	**Pre Avg**	**Post Avg**	**% Improvement**
2021	19	8	58%

Discussion:
As has been the case every year, graduates of the program in 2021 demonstrate significant improvement in the serious behavior problems that brought them to

treatment. This is the progress that matters most to the families receiving the children after treatment.

The Personal Inventory of Kid's Optimal Capacities/PIKOC

The PIKOC provides a unique tool currently available only to our program. This instrument brings an important component to the overall consideration of improvement--the child's opinion. Although some would question the value or truthfulness of the child's self-opinion, research on the PIKOC has shown that children tend to rate themselves more evenly than parents or teachers, in that they rate their weakness slightly higher and their strengths slightly lower than adults (parents and teachers). With this in mind, the self-reflection of the children is of interest given that most have shown significant growth and improvement on several other measures. Overall the children rated themselves 3% higher. Nearly half the children rated themselves lower at the end of treatment with the therapists indicating they develop a more realistic self-perception.

The total score on the PIKOC (the "health integrity index") gives a picture of how the child views their overall functioning in eleven areas. In 1998 there was not a significant change in the pre and post-test, in 1999 there was a 6% improvement, in 2000 a 13% improvement, in 2001 a 4% improvement, in 2002 a 3% improvement, in 2003 a 15% improvement, in 2004 a 12% increase, 18% in 2005, 15% in 2006, 18% in 2007, 11% in 2008, 16% in 2009, 8% in 2010, 7% in 2011, 12% in 2012, 4% in 2013, less than 1% in 2014, and 1% in 2015, 4% in 2016, 2% in 2017, 5% in 2018, 24% in 2019 (much higher than typical), and 7% in 2020. So the 3% this year is a somewhat typical result.

Overall the rate of improvement indicates that the children saw themselves making improvement in overall health this year, much like other years. Because this is a self-report of the children, it often reflects lower improvement than other measures.

How the PIKOC is scored: The PIKOC gives a child the opportunity to give themselves a letter grade A (score 4), B (score 3), C (score 2), or D (score 1) on 8 or 9 questions in each of the following 11 areas important for a child's behavioral health:

- Being Responsible
- Social Skills & Getting Along with Others
- Working and Doing My Part
- Thinking Smart
- Being a Positive Person
- Self-Care
- Handling Feelings
- Love & Relationships

- Imagination
- Communication
- Being Safe

Average PIKOC Improvement			
Year	**Pre Avg**	**Post Avg**	**% Improvement**
2021	290	285	3%

A Comparison of 16 Years of Outcome Data

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
ADAS	37%	51%	34%	22%	58%	42%	44%	75%	34%	45%	48%	58%	56%	21%	46%	38%
CAFAS	36%	33%	38%	29%	25%	43%	44%	45%	65%	47%	48%	47%	38%	45%	57%	56%
CASII	20%	16%	19%	12%	19%	20%	31%	23%	23%	27%	26%	38%	36%	27%	29%	38%
Clinical	56%	63%	58%	45%	59%	66%	66%	59%	63%	65%	66%	56%	60%	58%	65%	65%
LCEI	20%	09%	20%	15%	14%	24%	21%	30%	23%	24%	18%	33%	29%	13%	38%	38%
Level 5*	74%	77%	80%	64%	76%	90%	86%	96%	65%	95%	79%	95%	83%	X	X	X
MBRS*	X	X	X	X	X	X	X	X	X	X	X	X	X	58%	65%	58%
PIKOC	15%	18%	11%	16%	08%	07%	12%	4%	1%	9%	4%	2%	5%	34%	7%	3%
COM**	14%	36%	40%	160%	100%	31%	138%	171%	300%	0%	233%	33%	75%	-16%	38%	X**
DLS**	-22%	30%	111%	13%	-59%	22%	36%	44%	167%	0%	70%	70%	30%	-7%	24%	X**
SOC**	22%	60%	-40%	-50%	-19%	200%	133%	250%	400%	25%	122%	200%	140%	47%	44%	X**

***Level 5 Criteria changed to MBRS in 2019.**

****Vineland was not used in 2021 due to the wide disparities year by year in scoring. In 2022 we will resume using the Vineland with a new process in place to help mitigate this disparity.**

Comments on Oregon's Mental Health System for Children

Changes in the Oregon mental health system continue to be monitored. 2021 saw a combination of two substantial impacts on the system of care: The passage and implementation of Oregon's senate bill 710 and the ongoing pandemic. The senate bill alone has changed the landscape of Oregon's treatment programs that work with our most violent and destructive children leaving many programs struggling to meet its demands. Procedures pertaining to physical containment are now far more complex and time consuming and the bill appears to be having significant unintended consequences. Oregon's most violent and dangerous children and teens are more than ever before moving from one short-term place to another including in hotels rather than being able to receive the level of treatment they truly need. The demands of SB710 have resulted in some programs choosing to serve a less acute population of children, leaving those most in need with fewer resources. This is a big hit to a state system that already

lacks residential resources after years of Oregon state policy changes moving away from residential care.

And as though that were not enough, pandemic-related workforce changes have gutted existing mental health program in Oregon due to staffing shortages forcing closures of entire programs and units. In 2021 our newest residential treatment program, Crystal Creek, ran close to 7 months from its inception on December 2, 2020 until June 17, 2021 when we had to shut its doors due to staffing shortages. In early November, 2021 we had to take an unprecedented step and have four Castle residents move on before they were finished with treatment in order to reduce our census to be within OHA's mandatory staffing ratios. We chose 4 children who were very close to treatment completion, but this was a very painful step we were forced to take. Jasper Mountain residential capacity was reduced by 11/4/21 from 20 to 16 where it remains (at 80% of capacity). Yet in other residential programs which serve our population of young children in Oregon, the picture is even more discouraging:

- In September, 2021, Kairos' 15-bed New Beginnings Program shut its doors citing pandemic-related staffing shortages and the poaching of its employees by a neighboring program in Southern Oregon.
- In this same month, Looking Glass Residential Program in Eugene reported serving 9 residents with a bed **c**apacity of 26 functioning at 35% of program capacity.
- Trillium's Farm Home and Parry Center in Portland reported serving a combined 55 residents with a 109-bed capacity thus functioning at 50% capacity.

Similar figures from Looking Glass and Trillium persist to this day as the worker shortages continue to be a primary barrier to increasing service delivery. In addition, our neighboring programs report a strong dependence upon surge workers to maintain current bed capacity while Jasper Mountain relies very little upon this temporary source of employees. Programs throughout Oregon are attempting to recruit staff by raising wages and providing other incentives. As our board and managers grapple with staying financially above the water line while striving to serve more children, it is good to have perspective on how other programs like ours are doing under similar workforce conditions.

Concluding Remarks

In 2021 when considered with data from all children discharged from the program since 1998, and utilizing several sources of observations, the evidence shows that children continue to improve substantially in all areas:

- Clinical improvement (Treatment item progress) 65%
- Serious behavior (MBRS) 58%
- Functional level (CAFAS) 47%
- Attachment and relationship skills (ADAS-R) 38%

- Required Level of Care (CASII) 30%
- Stability (LCEI) 38%

Although research is sometimes referenced that shorter stays have led to improved outcomes for children, this has not been the case at Jasper Mountain since the system changed in 2008. Despite our challenges with changes in the system of care, the program continues to provide an excellent track record of service for Oregon's most disturbed children as well as those from many other parts of the country.