Outcome Assessment for 2022

Jasper Mountain Psychiatric Residential Program

March 2023

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 19 children who discharged from Jasper Mountain in 2022 with some reference to the now 355 children discharged since 1998. This report examines the overall trends in outcome data since 2006 (2003 for the CAFAS instrument).

In 2022, there were five children who discharged abruptly from the program without getting to finish their treatment. Four of these children were discharged on an emergency basis by the program due to SB 710 restrictions and one was taken home against medical advice by their mother. While devastating for the children and families involved this provided an opportunity to examine data for a subset of children unable to complete treatment versus those children who could. In this report the five children who left abruptly will be termed the UD group (Unplanned Discharge group). For all but the PIKOC, data will be examined 3 ways in this report: 1. Overall (All 19 children's scores), 2. just the UD group, and 3. just the group of 14 children who completed treatment. The overall data will be used to compare data trends since 2006. Readers can compare the scores of the children who completed treatment and those who could not to see the impact of reducing the length of stay.

Summary of Findings

This summary concerns the children discharged from the intensive residential treatment program during 2022. The following results were seen in the 19 graduates using pre and post measures this year:

- In 2022 some of our most challenging children were served under challenging conditions for the program (SB 710, workforce challenges).
- The four children who were discharged on an emergency basis in 2022 were four of our most challenging youth. One child was not a good fit for the program and their improvement scores would likely have been poor even had they completed treatment. For the other 4 youth who left early there was more promise for improvement had they remained.
- This year a running average of the past 16 years for each assessment was provided as a basis for comparison.
- Overall, there was a 23% average improvement in attachment disorder for this

cohort which was 20 improvement points lower than the average. 8 out of the 19 children who left in 2022 scored in the Significant Attachment Disorder category at intake and 6 of those 8 children were 11-12 years old at intake and had suffered multiple changes in caregivers.

- As measured by the CAFAS there was a 33% average improvement in functioning among this group of graduates, 6 improvement points lower than average of 39%. When UDs are factored out the CAFAS improvement in 2022 was 39%.
- According to the CASII Level of Care Assessment, 22% improvement was seen compared to the running average of 39%. When UDs are factored out, the average improvement jumps to 39%.
- There was 54% average improvement overall on clinical treatment objectives and when UDs are factored out, the improvement is above the running average of 60%.
- There was a 46% average improvement among this group on their most serious behaviors and 89% of 2022 graduates went into a family setting after treatment.
- A full 79% of our graduates in 2022 dropped an entire level of care, no longer requiring residential treatment or hospitalization.
- Not surprisingly, assessment data in 2022 suggests that completion of treatment and length of stay are vital components of the positive outcomes we experience in our program.

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.

However, 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.

Outcome Assessment for 2022

Jasper Mountain Psychiatric Residential Program
March 2023

Assessment Measures Used

We used the following seven standardized, subjective judgment, or behavioral tracking for the 2022 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 2022, the Vineland-3 was not utilized. Research was done to find an adaptive behavior measure that is less difficult and lengthy to use and score and whose inter-rater reliability would be greater.

Outcome Assessment for 2022

Jasper Mountain Psychiatric Residential Program
March 2023

Results per Assessment

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 often 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 indicate Moderate Attachment Disorder; scores between 25-40 indicate Attachment Problems, and scores below 24 indicate Minimal Attachment Issues.

Average ADAS-R Improvement 17-year running average improvement: 43%			
Year 2022	**Pre Avg**	**Post Avg**	**% Improvement**
Overall	53	41	23%
UD Group	51	46	9%
w/o UD's	54	45	29%
% Improvement in *Significant Attachment Disorder* group (n=8)			15%

Discussion:

In 2022 the ADAS-R improvement score was lower than in 2020 and 2021 but higher than in 2019 (21%) The overall improvement rate this year was 20 percentage points lower than the running average (14 points lower if we eliminate the scores for children in 2022 who could not complete treatment). The starting average ADAS-R score was higher by 5 points than the larger group of graduates in 2021 indicating that as a group, the 2022 graduates had more severe attachment scores as whole than the 2021 cohort.

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 over the past 20 years. The instrument measures impairment ranging from minimal to severe 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 Role Performance
- Home Role Performance
- Community Role Performance
- Behavior Toward Others
- Moods & Emotions
- Self-Harm Behavior
- Substance Use
- Thinking

Average CAFAS Improvement 20 year running average: 39%			
2022	**Pre Avg**	**Post Avg**	**% Improvement**
Overall	153	102	33%
UD group	152	116	24%
w/o UD's	154	94	39%

20 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%

20 Years of CAFAS Data (continued)																			
	2022	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**
Pre	153																		
Post	102																		
% I	33%																		

Discussion:
18 out of the 19 children in this cohort improved on the CAFAS by at least 20 points. The one child whose intake and discharge CAFAS was identical was discharged prematurely and was a poor fit for the program due to developmental disabilities that rendered him unable to make use of the treatment offered. Compared to the running average improvement on CAFAS scores this year's average was lower by 6% overall.

Outcome Assessment for 2022

Jasper Mountain Psychiatric Residential Program

March 2023

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 17 year running average: 25%			
2022	**Pre Avg**	**Post Avg**	**% Improvement**
Overall	27	21	22%
UD group	26	24	8%
w/o UD's	27	19	30%

Discussion:

All but one graduate improved on the CASII measurement in 2022 and that one child was a poor fit for the program (mentioned earlier in this report). This year's improvement percentage overall was 3 points lower than average but if UD scores are factored out, it is 5 points higher than average.

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

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 (LOC)	DESCRIPTION	CASII Score	2022 Pre	2022 Post
0	Basic prevention	7-9	0	0
I	Recovery maintenance	10-13	0	0
II	Intermittent outpatient	14-16	0	1

III	Regular outpatient	17-19	0	2
IV	Intensive outpatient	20-22	1	10
V	Staff-secure 24-hour psychiatric residential	23-27	13	5
VI	Locked 24-hour psychiatric residential	28-35	5	0

Discussion:
Upon intake, 100% of the children in 2022 scored at Level IV (Intensive Outpatient Treatment) or higher on the CASII. At discharge 79% dropped one LOC (Level of Care); 32% dropped 2 LOC's; 0% dropped 3 LOCs, and 0% 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 must 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.

Graduates per Type of Placement 2022					
Year	Total grads	Home (bio or adopt)	Foster Home	Group Home	Facility
2022	19	10	7	0	2

Discussion:
In 2022 89% of our graduates moved on to family settings, as opposed to a group home or facility. Follow-up data will tell the story of whether those children were able to maintain in that level of care. Two children required a facility placement upon discharge and those children had come to us from a facility setting in their state of origin. One of those children was too developmentally impaired to manage our setting successfully.

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 2022 **17 year running average: 60%**	
Overall:	54%
UD Group:	38%
w/o UD's:	61%

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 an overall improvement of 54% is considered to be good. This year when those children who could not complete treatment are factored out, the average clinical improvement is above the running average at 61%.

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 **17 year running average: 23%**			
2022	**Pre Avg**	**Post Avg**	**% Improvement**
Overall	42	32	24%
UD group	45	37	17%
w/o UD's	43	31	28%

Outcome Assessment for 2022

Jasper Mountain Psychiatric Residential Program
March 2023

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 addressed 8. The Level 5 addressed the same 5 serious behaviors covered by the MBRS (aggressive/assaultive; sexual behaviors/offenses; suicidal/depressed; self-abuse; and fire setting) 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 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). The maximum possible score on the MBRS is 36:

- 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 4 year running average: 56%			
2022	**Pre Avg**	**Post Avg**	**% Improvement**
Overall	24	14	42%

UD group	25	17	32%
w/o UD's	24	13	46%

Discussion:
As has been the case every year, graduates of the program in 2022 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. In 2022 the rate of improvement was lower than the past 3 years of using the MBRS by 12 average points.

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 do. The self-reflection of the children is of interest given that most have shown significant growth and improvement on several other measures. Overall, children rated themselves 9% higher. Most children rated themselves lower at the end of treatment with the therapists indicating they developed 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. Overall, in 2022 graduates rated themselves 9% higher at discharge than at intake which is a typical score year by year, just short of the average of 10% improvement. For this measure it is less important to compare the early discharge group because the children's self-ratings are not necessarily indicative of treatment-related progress.

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

Outcome Assessment for 2022

Jasper Mountain Psychiatric Residential Program
March 2023

- Imagination
- Communication
- Being Safe

Average PIKOC Improvement 17 year running average: 10%			
2022	**Pre Avg**	**Post Avg**	**% Improvement**
Overall	283	258	9%

A Comparison of 17 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%	8%	7%	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 & 2022. The CEO will decide whether to return to the Vineland or use another measure after research revealed several that have better inter-rater reliability due to ease of administration and scoring.**

	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037
ADAS	23%															
CAFAS	33%															
CASII	22%															
Clinical	54%															
LCEI	27%															
MBRS	42%															
PIKOC	9%															
Adaptive	X															

Outcome Assessment for 2022

Jasper Mountain Psychiatric Residential Program
March 2023

Comments on Oregon's Mental Health System for Children

Changes in the Oregon mental health system continue to impact Jasper Mountain and are being monitored. 2022 saw the implementation of SB 710's restrictions on methods for containing a child physically which led directly to four emergency discharges from our residential program, something we had never done before. The impact of SB 710 on residential programs in Oregon continues to make an impact on the seriously disturbed children in the state. We continue to be committed to the most challenging children and it is harder than ever to serve them. To continue to do so, our direct care staff were trained this year in Advanced CPI measures which allow for safe management of violent children and youth within the guidelines of SB 710.

The demands of SB 710 have resulted in some programs choosing to no longer physically intervene with aggressive children, likely meaning they are serving a less acute population. 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. Oregon's most violent and dangerous children and teens are more than ever before moving from one short-term placement to another including hotels rather than being able to receive the level of treatment they truly need. Other states we work with are watching Oregon closely as they anticipate similar legislation to impact their systems of care. Here at the conclusion of 2022 we remain optimistic that we can increase our capacity to serve more of Oregon's children even in the challenging climate in which we find ourselves.

Concluding Remarks

In 2022 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, particularly when the child can remain in the program until they are ready for discharge:

- Attachment and relationship skills (ADAS-R) 23% (29% w/o UD's)
- Functional level (CAFAS) 33% (39% w/o UD's)
- Clinical improvement (Treatment item progress) 54% (61% w/o UD's)
- Stability (LCEI) 27% (28% w/o UD's)
- Serious behavior (MBRS) 42% (46% w/o UD's)

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.