Overview

In 2018 Monte Nido and Affiliates began a comprehensive research study, approved by an Institutional Review Board, in order to assess treatment outcomes in our programs. Specifically, our Clementine patients who consent to participate in our research study complete a series of questionnaires upon admission, transfer to a new level of care (stepping up or down), as well as upon discharge from the program. Additionally, we obtain follow-up data for patients who consent at specified time-points after their discharge. The surveys administered represent the gold standard of assessments for eating disorder pathology as well as depression, anxiety and trauma.

The purpose of these questionnaires is multifaceted. Primarily, it represents our commitment to personalized treatment planning. This data provides a snapshot of each patient's distinctive symptom presentation on measures of eating disorder symptoms, depression, anxiety, functional impairment, and trauma reactivity. This information deepens our understanding of the clinical challenges specific to each patient and as a roadmap for exploration of the factors that may be maintaining the eating disorder. Data guides the clinical teams in developing a shared language for each patient's experience, to build engagement and design more effective treatment plans.

In addition to guiding treatment planning, this data allows leadership at Clementine to track program effectiveness and identify areas for program development. As a company, we are continually evaluating whether we are providing the most effective and evidence-based interventions to our patients. Last, this data is collected with the hope and expectation of contributing to a growing body of research and helping the field of eating disorders continue to move forward.

Sample

The patient sample for 2018-2019 included data for 342 adolescents from six different Clementine programs. Seventy seven patients discharged from Clementine South Miami, 51 from Malibu Lake, 97 from Portland, 72 from Briarcliff Manor, 30 from Twin Lakes and 15 from the Woodlands.

These patients ranged in age from 11 to 17 years old with the average being 15. The average length of stay was 48.44 days.

The Clementine sample included patients with the following Eating Disorder diagnoses: 55.9% Anorexia Nervosa, Restricting Type, 16.2% Anorexia Nervosa, Binge/Purge Type, 7.9% Bulimia Nervosa, 4.9% Binge Eating Disorder, 1.8% ARFID, and 15.9% OSFED.

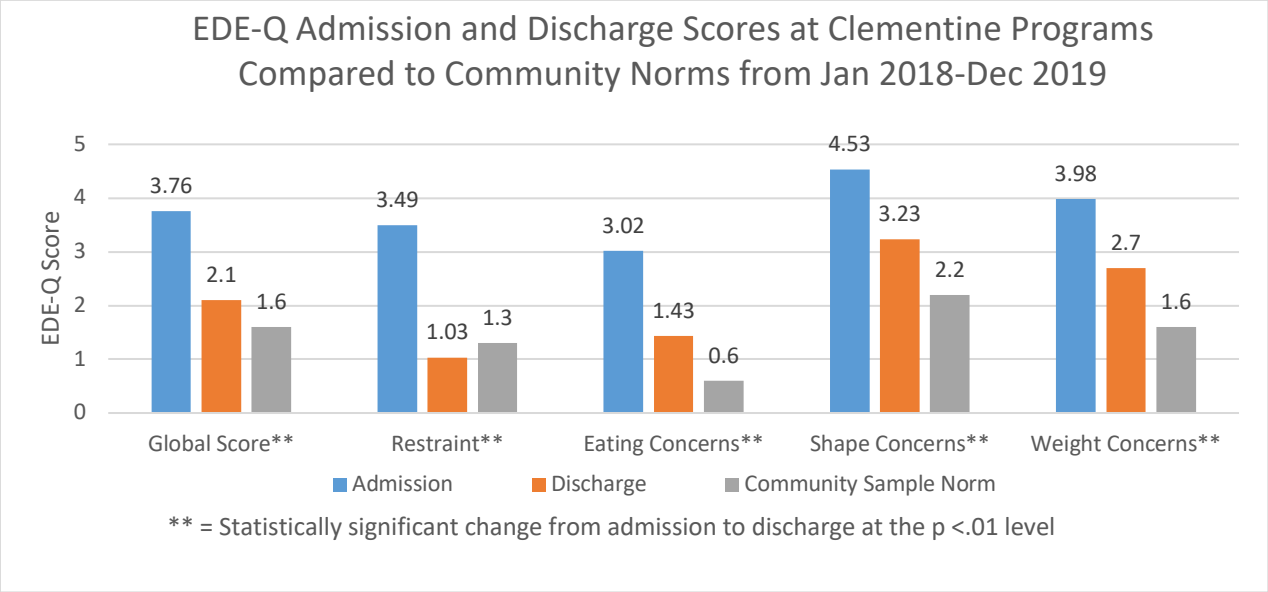
Importantly, this group of patients also presented with multiple co-morbidities. For example, among all eating disorder diagnoses, approximately 87% were diagnosed with an anxiety disorder and over 83% were diagnosed with a mood disorder.

Eating Disorder Symptoms

Eating Disorder Symptoms were measured using the Eating Disorder Examination Questionnaire (EDE-Q), a 28-item, self-report measure assessing the core features of eating disorder psychopathology. It is the gold-standard self-report assessment that has demonstrated reliability, validity and correlation with the lengthier assessments of eating disorder symptomology. This assessment tool measures a range of symptoms including fear of weight gain, self-induced vomiting, and loss of control with food, thus capturing the complexity and unique features of each individual's eating disorder.

Results indicate that on average, Clementine patients experienced clinically and statistically significant reductions in eating disorder symptoms from admission to discharge.

On average, patients presented at admission with severe eating disorder symptoms relative to adolescent female community norms. Upon discharge, average patient scores on the EDE-Q were reduced significantly on all scales, suggesting clinically meaningful improvements. The graph below provides mean admission and discharge scores at Clementine in comparison with community norms.



Eating disorder symptomology was also assessed using The Eating Disorder Inventory (EDI-2). The EDI-2 is a self-report measure of symptoms frequently related to anorexia nervosa or bulimia nervosa. This measure was designed to be an aid to forming a diagnosis and not as the exclusive basis for making a diagnosis. It is extremely valuable in guiding treatment planning and clinical work. The EDI-2 provides information regarding the psychological and behavioral dimensions of eating disorders. It has 91 items and 11 subscales. The subscales and a brief description of what they measure are as follows:

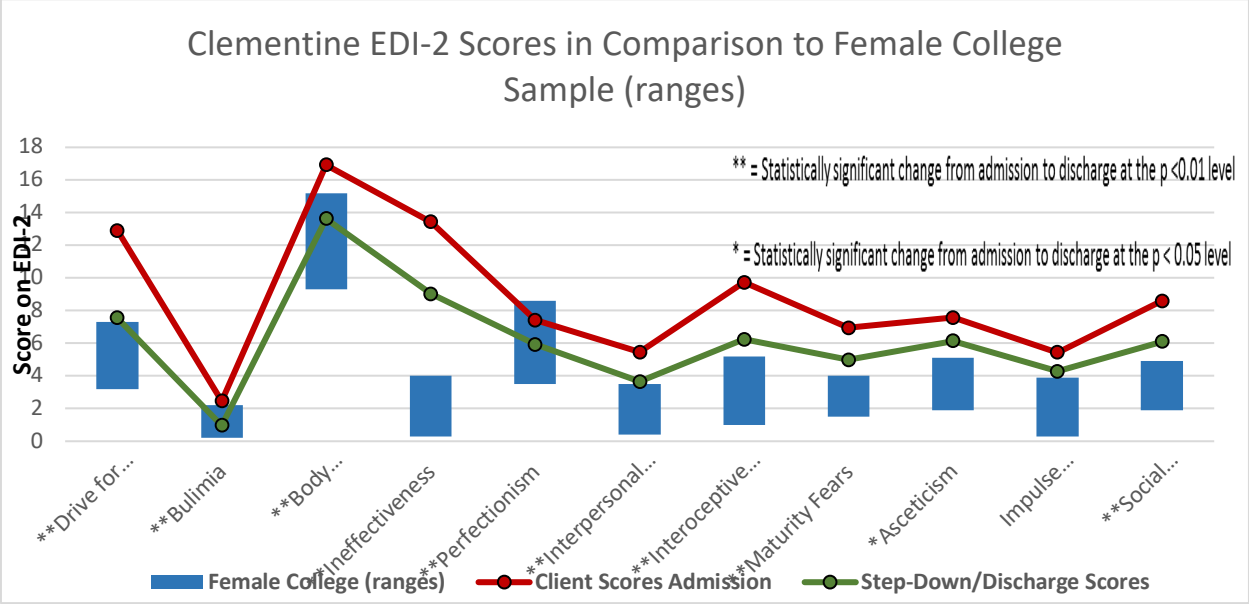
1. Drive for thinness (DT): an excessive concern with dieting, preoccupation with weight, and fear of weight gain.

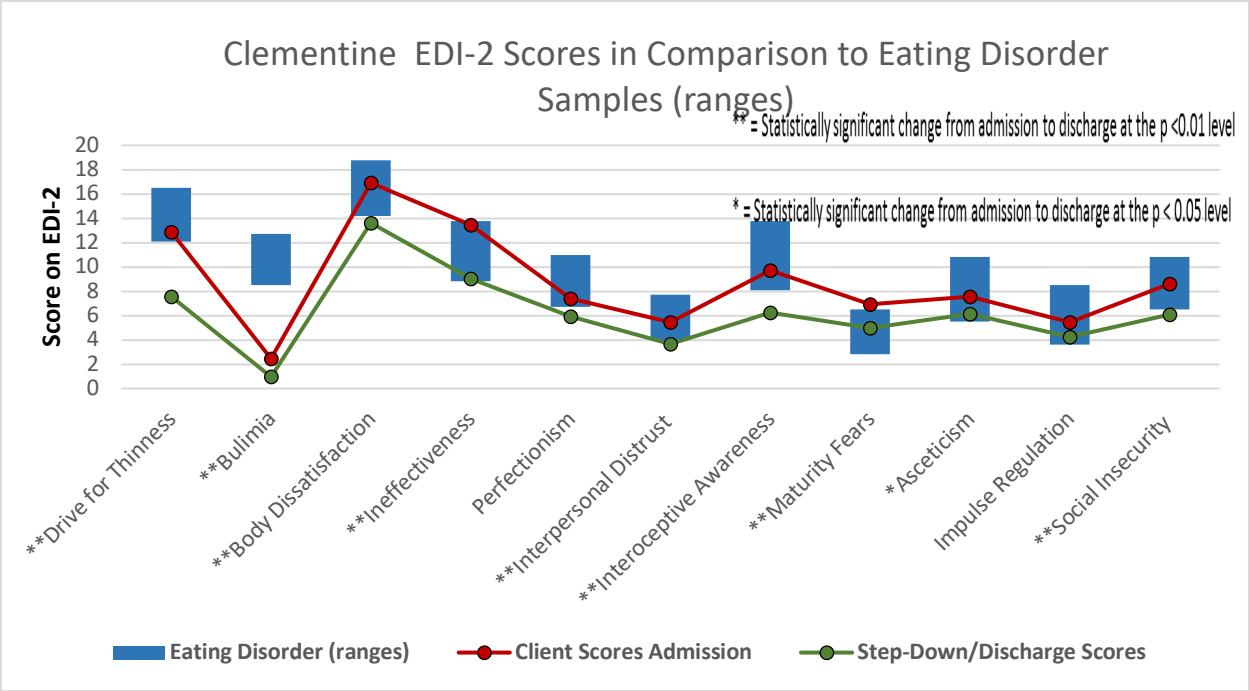
2. Bulimia: episodes of binge eating and purging.
3. Body dissatisfaction: not being satisfied with one's physical appearance.
4. Ineffectiveness: assesses feelings of inadequacy, insecurity, worthlessness and having no control over their lives.
5. Perfectionism: not being satisfied with anything less than perfection.
6. Interpersonal distrust: reluctance to form close relationships.
7. Interoceptive awareness: the ability to discriminate between sensations and feelings, such as hunger and satiety.
8. Maturity fears: the fear of facing the demands of adult life.
9. Ascetism: reflects a tendency to find value in self-deprivation, as well as denial and control of feelings, wants, desires, and urges.
10. Impulse Regulation: the ability to regulate impulsive behavior, especially binge behavior.
11. Social Insecurity: estimates social fears and insecurity.

Results indicate that Clementine patients demonstrated statistically significant reductions at the $p < 0.01$ level on all subscales.

Below see graphs comparing admission and step-down/discharge scores to those of female college students without an eating disorder diagnosis as well as sample of adults diagnosed with an eating disorder. Of note, in order to most accurately compare our patients' scores with the EDI-2 eating disorder norming sample, we did not include patients diagnosed with ARFID or BED in these specific analyses.

Some caution is warranted in interpretation as the norms for this measure are for adult individuals. That being said, the graphs below are illustrative of the particular areas of difficult for our clients as well as the improvement from admission to discharge.

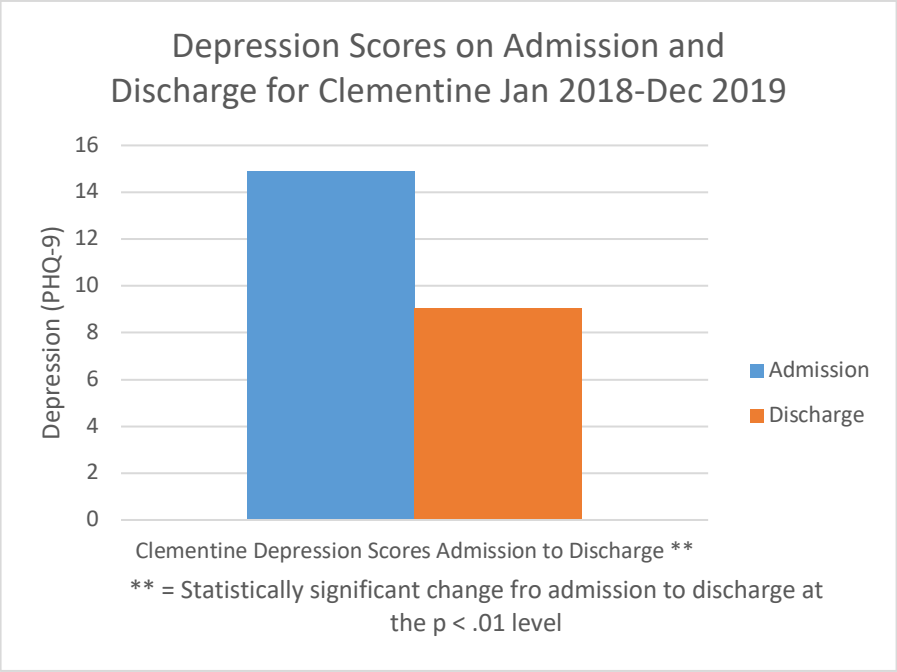




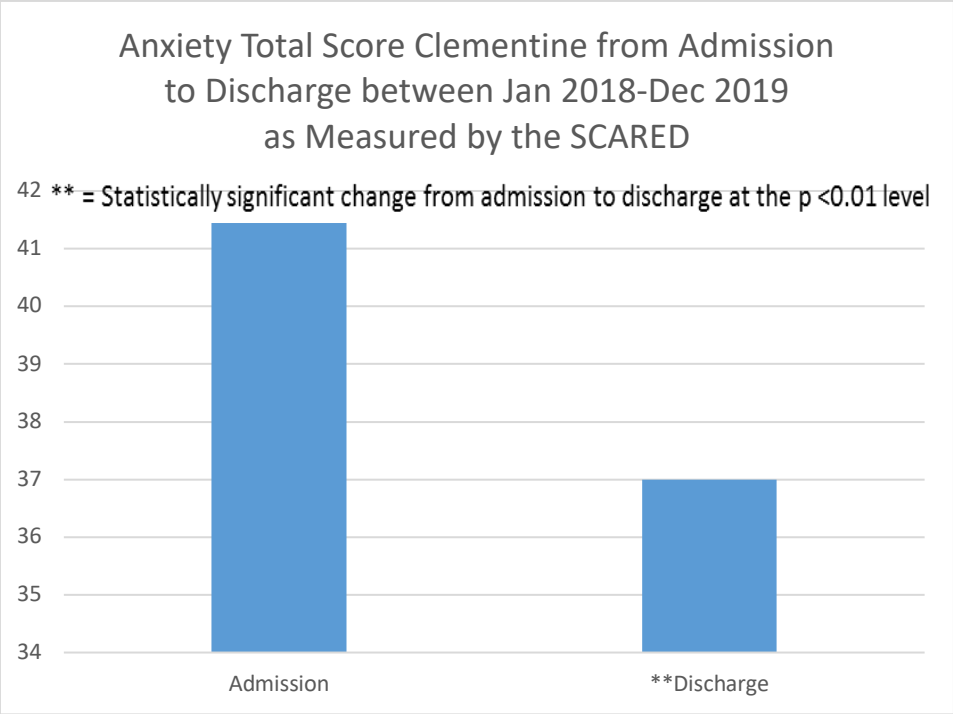
Depression and Anxiety

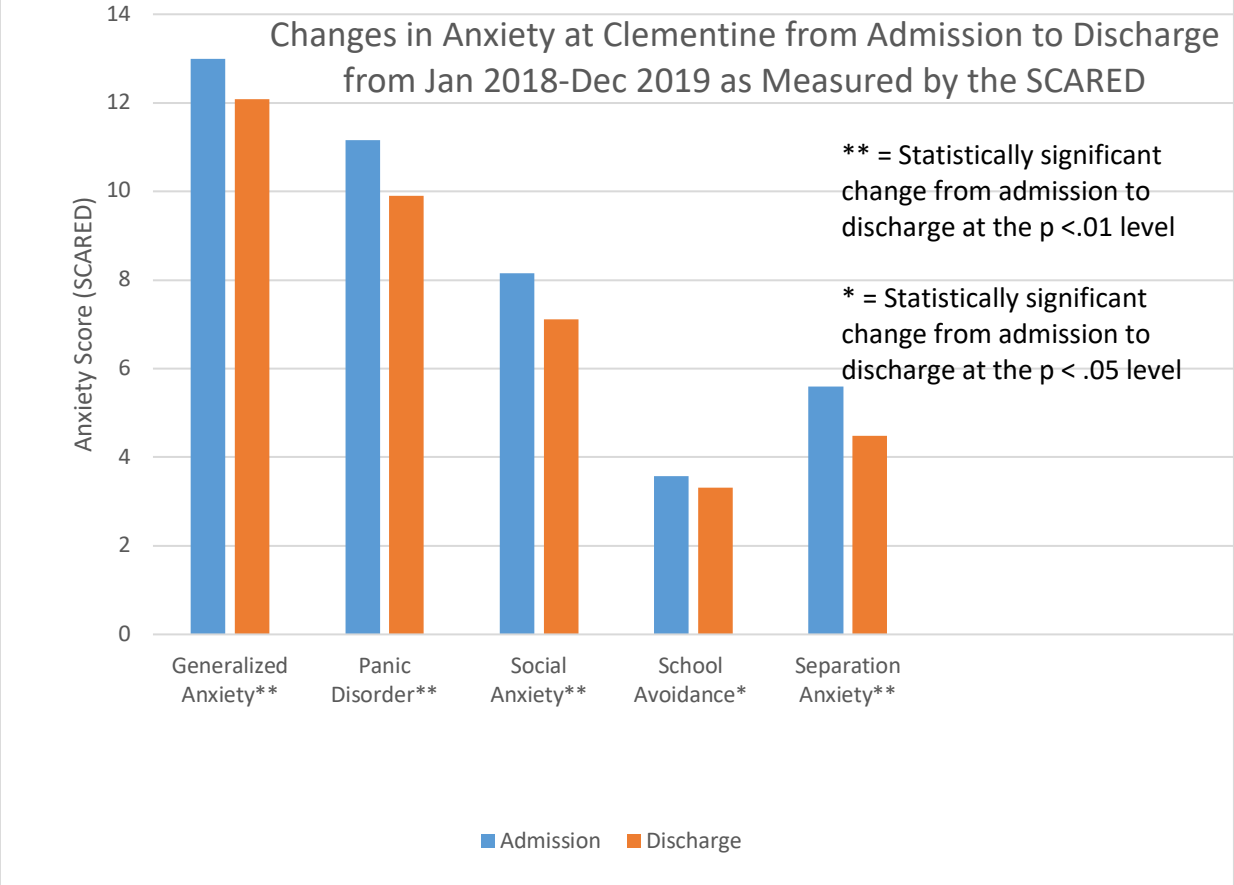
Symptoms of depression were assessed using the Patient Health Questionnaire-9 (PHQ-9), a nine-item, validated tool used for screening and measuring the severity of depression.

Overall, results show clinically and statistically significant depression symptom reduction for our Clementine patients. On average, scores on the PHQ-9 indicated patients admitted to treatment with symptoms of depression that may warrant a diagnosis based on clinical assessment and discharged without symptoms consistent with a diagnosis of depression. The graph below represents changes in depression scores.



Symptoms of anxiety are measured using the Screen for Child Anxiety Related Disorders (SCARED), a 41-item, validated self-report instrument used to screen for childhood anxiety disorders. This tool generates a Total Score and 5 Factor scores: Panic Disorder or Significant Somatic Symptoms, Generalized Anxiety Disorder, Separation Anxiety, Social Anxiety Disorder, and Significant School Avoidance. Scores indicated that Clementine patients experienced statistically significant reductions in overall anxiety from admission to discharge (as measured by the total score), as well as on all factor scores.


Anxiety Total Score Clementine from Admission to Discharge between Jan 2018-Dec 2019 as Measured by the SCARED
** = Statistically significant change from admission to discharge at the p <0.01 level
42
41
40
39
38
37
36
35
34
Admission
**Discharge


Changes in Anxiety at Clementine from Admission to Discharge from Jan 2018-Dec 2019 as Measured by the SCARED
** = Statistically significant change from admission to discharge at the p <.01 level
* = Statistically significant change from admission to discharge at the p < .05 level
Anxiety Score (SCARED)
14
12
10
8
6
4
2
0
Generalized Anxiety**
Panic Disorder**
Social Anxiety**
School Avoidance*
Separation Anxiety**
Admission
Discharge

Posttraumatic Stress Disorder (PTSD)

Clementine has also been systematically assessing for the presence and severity of PTSD and its symptoms. The presence of significant life events that either happened to an individual or was witnessed (DSM-5 Criterion A) was recorded at admission using the Childhood Trauma Questionnaire (CTQ), and in addition, other PTSD symptoms were assessed at admission and discharge using the PTSD Symptom Checklist for DSM-5 (PCL-5) (DSM-5 Criteria B-E). Data have been collected and are in the process of being analyzed. However, preliminary results indicate that approximately 40% of individuals admitted to Clementine met criteria for the diagnosis of PTSD.

Treatment of PTSD and Complex PTSD

Clementine has developed an integrated treatment program to properly assess and treat the high rates of severe trauma, PTSD, dissociation, and related comorbidities that often accompany eating disorder symptoms, especially those who have not responded to outpatient care. Trauma and PTSD are known factors that can often lead to treatment dropout or failure. In concert with expert consultation, Clementine has trained its psychotherapy staff to utilize and integrate Cognitive Processing Therapy (CPT) into the overall, individualized and integrated treatment plan for such patients.