Attach the form to all entries. Entrants must complete all sections for the entry to be considered complete. A copy of this official entry is available electronically at *www.pacounties.org. Please indicate if this is a secure detention ___ or alternative program ✓ award entry.*

Owner /Contracting County _Eileen Carr_ County Class _Bucks_
Address _13 9 Main St_ City _Doylestown_ Zip _18901_
Contact Name _Kristin DiForest_ Title _Director of Program Services Compliance_
Department _Administration_ Phone (_215_) _345-8633 x4 412_
Fax (_215_) _345-8334_ Email _kdiforest@clearvault.com_

PROJECT INFORMATION

Title _Residential Treatment Impact and Client Outcome Measurement (RTCC)_ Start Date _April 2013_

Each application may be submitted with two signatures. Place appropriate signatures on two of the lines below:

X _[signature]_

Chair of the Board of County Commissioners   Facility Chief Executive Officer _[signature]_

Oversight Board (where applicable)

PROGRAM NARRATIVE

Attach a separate program narrative document in the form that addresses each of the following subject areas, and does so in the order presented below. *Entries must be typed in a Word-document, Times New Roman, 10-point type.*

A separate program narrative document must be attached to this form that addresses each of the following subject areas, and does so in the order presented below.

- A description of the identified need and the background including what programs were in place before the current project, if any, and how it led to this effort.
- A description of the project, including any evidenced-based approaches to divert individuals from further penetration into the juvenile or adult justice system, community involvement strategies, formation of stakeholder groups, county-wide planning strategies, etc.
- A description of expectations and measurable goals, including supporting data.
- A brief description of how the project was evaluated and any lessons learned.
- A brief description of the community, including a description of key stakeholders, organizations, and county departments that were involved in the project.
- A description of how the activities described in a project started in the past were altered or will be continued based on experience, including plans for leveraging additional resources.
- A description of any costs associated with the project and how it was funded; cost savings, if any, and any change in community acceptance, reductions in insurance costs, or inspection improvements that resulted from the program.

SUPPORTING DOCUMENTS

Please attach any supporting documentation to demonstrate the impact of the project in cost or population outcomes, or other data to demonstrate the considerations utilized in determining the scope or design of the project. Scoring will be based on factors including the entrant's description of the problem, the soundness of the approach, and success in meeting goals and objectives. Award submissions will receive consideration for outcomes or best practices supported by data.

Entries must be typed in a Word-document, Times New Roman, 10-point type. Entries must be received by close of business on February 13, 2015. Winners will be announced during the CCAP Spring Conference, March 22 - 24, 2015.

More information: Brinda Carroll Penyak, *bpenyak@pacounties.org*

EDISON COURT, INC.

Residential Ongoing Research Endeavor (RORE): Treatment Impact & Client Outcome Measurement

Edison Court, Inc.
2/10/2015

RORE Background: Description of Identified Problem and Project History

Residential Treatment Facilities (RTFs) have experienced pressures to move clients as efficiently as possible to the next lowest level of care, by means of self-monitoring service delivery and client outcome goals in the context of providing evidence-based treatments. Still, little empirical research has been conducted to objectify residential treatment, and research that has been conducted has pointed out stark contrasts between providers in terms of treatment type, intensity, and duration. Currently, the RTF level of care represents one of the most expensive treatment options, due to the often extensive length of stay. Motivated by this fact, administrations have poured increasing effort into finding acceptable community-based options to residential treatment, generating increasing empirical support for this option while RTFs remain largely undefined as a treatment construct. According to Lyons, Terry, Martinovich, Peterson, and Bouska (2001), "Little is known about the anticipated outcomes of this [expensive] service."

Highlighting the need for evidence-based support of RTF treatment, Helgerson, et al. (2005), Epstein (2005), Bettmann & Jasperson (2009), Zimmerman (1990), Butler and McPherson (2007), Lyons et al. (2001) and Chancey et al. (2009) collectively indicate that RTF treatment remains a poorly defined construct that is compromised by divergent treatment approaches, intensities, durations, and delivering widely varying outcomes. This reality has limited efforts to analyze RTF effectiveness, due to the difficulty of determining comparable programs. In addition, specialization of RTFs has further fragmented the sample, with the existence of facilities designed to address general delinquency issues, sexually problematic behavior, significant psychiatric symptoms, etc. Additionally, admission, maintenance, and discharge criteria vary widely across RTFs. According to Zimmerman (1990), "One deficit is the lack of literature assessing specific programmatic elements. While adolescent residential and inpatient programs typically consist of standard program elements such as individual, group, family, and milieu treatments, few studies specifically evaluate these or other programmatic elements." More recently, Butler and McPherson (2007) found, "Another deficit in this body of literature is the lack of consensus on the definition of residential treatment. Various types of residential programs currently fall under the same defining label. This impedes researchers' abilities to conduct systematic evaluations on the efficacy of this approach." Bettmann and Jasperson (2009) assert, "Many studies fail to describe residential treatment programs in sufficient detail, making it difficult to replicate treatment approaches... In many cases, program approaches are simply labeled as a 'therapeutic community', 'cognitive behavioral', etc. The lack of more precise descriptions makes it difficult to

make causal attributions to the large number of confounds that could be present." Helgerson et al. (2005), in a best-case scenario study wherein RTFs were compared within a standardized state-run system of care, still postulated, "The present study provides a clear caution to not view residential treatment as a monolithic approach to serving children. Having demonstrated that significant provider differences do exist, this study sets the stage for future research that can identify specific predictors of these differences in outcomes."

The Precursors and History of our Clinical Accountability Project: the 'RORE'

In response to our intrinsic intent for increased clinical accountability, as well as the aforementioned lack of RTF accountability on a public health level, ECI has engaged in an increasing formalized client assessment protocol that evolved into the current 'RORE' project. Specifically measuring the treatment impact of our clinical interventions on dynamic risk and wellness variables for our clients, Edison Court began to operationalize the measurement of client gains and post-treatment outcomes in 2008 with the introduction of the Mathom Ongoing Research Endeavor (MORE), followed by the Easton Manor Ongoing Research Endeavor (EMORE), collectively referred to herein as the Residential Ongoing Research Endeavor (RORE). These protocols of clinical measurement followed our attempt to collect what information is currently available relevant to understanding of the role and value of residential treatment for adolescents, as well as factors that may differentiate programs in terms of effectiveness and efficiency. In light of the incumbency of residential treatment facilities to define, measure, and evaluate treatment targets and related interventions that ostensibly comprise the 'active ingredients' that intend to effect healthy cognitive, affective, behavioral and status changes in clients, in 2013 Jonathan Roberds, Psy.D., Clinical Director of ECI performed a review of relevant literature pertaining to Adolescent Treatment, Residential Treatment for Adolescents, and Sexually Problematic Behavior to identify the most pertinent treatment impact and client outcome variables for our served population. From this, Dr. Roberds articulated a specific protocol of data collection, scoring, recording, and reporting for over 100 variables of interest including client demographics, static factors (Personality, Intelligence, Actuarial history), Pre-Treatment and Post-Treatment Dynamic Factors (Risk and Protective Factors amenable to Treatment), Post-Treatment Outcome Variables (Quality of Life, Discharge Plan, Functioning), and Recidivism outcomes continuing for 5 years post-discharge (general, sex-offense specific) in ECI's Clinical Data Collection Process & Research Protocol (2013). Since the RORE's manualization, Dr. Roberds

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has overseen the systematic data collection undertaken by graduate psychology externs trained in psychological assessment as part of a continual, annual clinical research initiative with the following purposes:

1) To conscientiously monitor and improve our clinical service delivery to individuals, families, and the broader community.

2) To continually improve Edison Court's annual treatment impact and treatment outcome data collection and analysis processes.

3) To increase longitudinal continuity of data collection and analysis processes as a benefit to Edison Court's institutional clinical research initiatives.

4) To provide idiographic and nomothetic clinical data for use by our clinical providers and external stakeholders, respectively, who come to recognize the value of our work and improvement process.

5) Provision of care that is data-driven and based upon best practices.

6) To establish a continual Institution of research, publication, and teaching within our existing agency structure.

7) Enhancing treatment impact and treatment efficiency to enable subsequently less-restrictive and less costly treatment expense.

8) To ultimately contribute to the fund of knowledge supporting our generalist and specialized work with clients and the broader community.

As a process of continual improvement, the statistical results (descriptive, inferential) of the RORE are reported for each of our two residential treatment programs annually within respective Residential Treatment Impact and Client Outcome (RTICO) reports. Each year, useful information gleaned from the RORE, including notable treatment gains, notable lack of improvement within specific treatment variables, as well as clinical implications of the results and strengths and limitations seen within the current research process are discussed in an attempt to further refine our measurement and analysis for the benefit of the aforementioned purposes. The RORE represents an overlapping data system to ECI's Performance Quality Improvement (PQI) process, an organization-wide (residential and outpatient services), quarterly evaluation model that more broadly endeavors to advance efficient, effective service delivery and achieve strategic and program goals. The Clinical Accountability offered by the RORE complements the PQI by adding a deep level of interpretive analysis specific to our clinical services.

Recently, ECI was chosen to present at the Spring 2015 PCCYFS conference, using the RORE as a best-practices model for clinical accountability for our level of care.

RORE Project Description

A group of male adolescent clients who had been discharged from Mathom House, specializing in the treatment of sexually problematic behavior over the most recent five-year interval, contributed to our analysis of treatment impact and post-treatment outcomes. Over 100 variables of interest derived based upon empirical relevance and conventional clinical relevance to this population are investigated using a combination of standardized psychological assessment, actuarial (legal, clinical) data clinician ratings, residential staff ratings, client ratings, public databases, objective computerized assessments, and site-specific study measures. Quality of life outcomes as well as recidivism findings were related to static and dynamic client variables. A repeated measures component served to relate changes in dynamic functioning from clients' treatment commencement to completion. Successful and unsuccessful program graduates were differentiated with regard to predictors and outcomes. Following statistical analysis, the results from our initial RTICO report (2014) highlighted any notable treatment gains, non-significant gains, quality of life and functional outcomes at time-of-discharge, recidivism rates for the most recent five-year cohort of discharged residents, relationships between demographic, characterological, cognitive, actuarial, and pre-treatment dynamic variables to ultimate treatment gains, outcome status, successful treatment completion, treatment efficiency, and recidivism. Recommendations for clinical refinement were made, and recommendations for the subsequent RORE process were stated, and have been implemented, with our second annual RTICO report anticipated this June.

The following reflects the project design and content that reflecting our initial treatment impact and client outcomes report (RTICO) based upon the RORE Project (2014).

VARIABLES OF INTEREST

Demographic Variables

Age at Admission
Median Neighborhood Income
Special Education Status
Number of Trauma Types Experienced
Functional Community Behavior

Stable Variables (Cognitive)

Full Scale IQ
Verbal IQ
Perceptual Organization IQ
Working Memory Index
Processing Speed Index

Stable Variables (Personality)

Antisocial Orientation	Potential for Substance Abuse
Self-Esteem	Aggression
MMPI Scale 1: Hypochondriasis	MMPI Scale 2: Depression
MMPI Scale 3: Hysteria	MMPI Scale 4: Psychopathic Deviate
MMPI Scale 5: Masculinity/Femininity	MMPI Scale 6: Paranoia
MMPI Scale 7: Psychasthenia	MMPI Scale 8: Schizophrenia
MMPI Scale 9: Hypomania	MMPI Scale 10: Social Introversion
Domineering	Suicidal
Anxiety	Depression
Anxiety-Related Disorders	Borderline
Drug Problem	Alcohol Problem
Non-Support System	

Beginning Treatment and End Treatment Variables (Pretest and Posttest)

Peer Group Quality	Functional Behavior
Externalizing	Internalizing
Family Involvement	Family Functioning
Sexual Recidivism Risk	Peer Closeness
Deviant Sexual Interest: Child – Objective	Deviant Sexual Interest: Child – Subjective
Deviant Sexual Interest: Force – Objective	Deviant Sexual Interest: Force – Subjective
Difficulty Related to Deviant Sexual Interest	Voyeurism
Sexual Fetishism	Frotteurism
Exhibitionism	Transvestic Fetishism
Zoophilia	Foot/Shoe Fetish
Sexual Preoccupation	Response Inhibition
Emotional Regulation	Level of Criminogenic Need
Attitude Supportive of Sexual Offending	Level of Cognitive Distortion
Functional Empathy	Change Scores (all Treatment Variables)

Functional Outcomes

Age at Discharge	**Recidivism Outcomes: 5 – Year Tail**
Treatment Completion	Sexual Recidivism: Felony
Length of Stay: all Residents	Sexual Recidivism: Misdemeanor
Length of Stay: Graduates	Non-Sexual Recidivism: Felony
Residential Stability	Non-Sexual Recidivism: Misdemeanor
Family Reunification	Recidivism: Combined Group
Discharge Location Type	
Educational/Occupational Status	
Mental Health Status at Discharge	

RESEARCH METHOD

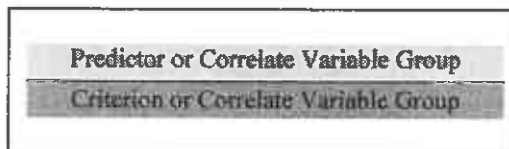|	
Experimental Design:	Mixed Methods: Repeated Measures; Independent Measures; Within Groups; Between Groups; Multifactorial; Longitudinal
Subjects:	104 clients discharged between January 1, 2009 and December 31, 2013 (*n* varies by analysis)
Data Collection Staff:	Psychology Externs, Clinical Director, Deputy Clinical Director, Child Care Worker, Clinical Therapist, Family Therapist

Data Entry Staff:	Jonathan A. Roberds, Psy.D. - Clinical Director
Data Entry Medium:	Excel Spreadsheet
Statistical Software:	PSPP
Data Measurement Tools:	Company Electronic Health Records, citydata.com, School Records, Clinical Records, WISC-IV, WAIS-IV, WJ-III Cog., ACES Trauma Checklist, MMPI-2, MMPI-A, PAI, PAI-A, CANS, BASC-2, ERASOR, JSOAP-2, ECI Family Rating Scale, Abel Assessment of Sexual Interest, IVA-CPT, ECI LCN Rating Form, DERS, Functional Empathy Rating Form, Peer Group Quality Rating Form, Deviant Sexual Interest Rating Form, Residential Stability Rating Form, Discharge Location Type Checklist, Educational/Occupational Status Rating Form, Mental Health Status Rating Form, Addiction Potential Rating Form, State Criminal Record Database
Statistical Analyses:	Pearson Chi-square Test, Independent Samples t-test, Linear Regression, Binary Logistic regression, One sample t-test, Paired Samples t-test, Spearman's Correlation, Wilcoxon Matched Pairs Test
Statisticians:	Clinical Director, Psychology Interns, Psychology Externs

ANALYSIS OVERVIEW SCHEMATIC

Predictor or Correlate Variable Group
Criterion or Correlate Variable Group

TREATMENT "FIT": How do Client Profiles Predict or Relate to Levels of Functioning and Status at Discharge?

Demographic Data	Stable Data	Beginning of Treatment Data	End of Treatment Data	Discharge Outcomes	Recidivism Outcomes

TREATMENT IMPACT: How are Clients Impacted by Treatment?

Demographic Data	Stable Data	Beginning of Treatment Data	End of Treatment Data	Discharge Outcomes	Recidivism Outcomes

OUTCOMES: How do Client Profiles, Treatment Impact, and Functioning at Discharge Predict or Relate to Status at Discharge and Recidivism?

Demographic Data	Stable Data	Beginning of Treatment Data	End of Treatment Data	Discharge Outcomes	Recidivism Outcomes

CORRELATIONAL: What Relationships Exist Among Clients' Demographic, Cognitive, Characterological, Functioning at Admission, Functioning at Discharge, Quality of Life at Discharge, and Subsequent Recidivism Data?

The reader is referred to the *ECI Clinical Data Collection Process & Research Protocol: Residential Services* (2013) for a detailed explanation of all procedures relevant to this study.

Expectations and Measurable Goals

The RORE reflects our organization's application of an evidence-guided model of inquiry in an attempt to identify and more deeply understand the clients that we serve, the impact that we may have upon them, and the well-being of our graduates and the communities to which most of them belong or will rejoin. We hope to edify ourselves through this ongoing process of data collection and analysis to improve our clinical services and the research design itself. As the initial annual findings of the RORE, along with recommendations for the refinement of clinical approach as well as for our research scope and process were published last year, results served as a baseline of clinical impact, from which we may make subsequent comparisons on an annual basis. The following represents our initial findings for Mathom House, in narrative form (result tables are included within our supporting attachments).

Population Characteristics

As we have determined, a population of adolescent males (age range 12.4 to 19.5 years; $\bar{x}=16.0$) who have exhibited sexually problematic behavior within the community for which they had been adjudicated either delinquent or dependent, appear to reflect normative distribution with regard to findings of socio-economic status, and overall cognitive functioning, based upon regional statistics. Three significant findings for our treatment sample that deviate from general population trends include:

- Mathom House clients are 3½ times as likely to require special education services reflecting multiple etiologies that impact their learning, occurring at a 46% rate compared to 13% occurrence within the population of Pennsylvania school-aged individuals.

- The sample demonstrates a statistically significant deficit in their ability to process information quickly and/or efficiently as was determined by conventional measures of *Processing Speed* compared with the general population; this area of intellectual functioning also represents a significant area of deficit relative to their other areas of processing ability. Though significant outcome correlates to this deficit have not yet been identified, etiological considerations including the influence of ADHD symptoms and emotional dysregulation are hypothesized, with life-long implications following a respective sequelae.

- Our clients, on average, have experienced five distinct types of significant trauma as children, a level of severity only experienced by approximately 10% of the general population based upon the landmark Adverse Childhood Experiences (ACE) Study (1998).

Characterological data for this group suggest near-typical personality functioning with slight, but non-significant mean elevation found in the areas of *Antisocial Orientation* (Average bordering on High Average), and fairly higher than normal occurrences of clinical elevation for this scale along with *Anxiety, Paranoia, Schizophrenia* (symptoms of), *Hypomania,* and to some degree, *Depression.* It may be that the relatively mild characterological discriminators of our population speak to findings that support a differentiation of sex offender conceptualization from that which applies to non-sexual delinquency populations. This may also relate to a distinction of the unique precursors that apply to adolescent sexual versus non-sexual crimes.

With regard to predicting successful program completers from non-completers, four logistical regression models were grouped by construct in an attempt to examine each static variable. Additionally, a Chi-square analysis of group association (completers, non-completers) attempted to add additional predictive validity to this end. Of most relevance were findings of higher social adaptability as measured at time of program admission by the *peer group quality* variable as predicting a successful completion of our treatment program as it currently exists. At this early point, regression/prediction models that include this variable in addition to *potential for substance abuse* (and its precursor, *low frustration tolerance*) appear to be somewhat promising predictors of this outcome.

Treatment Impact

Mathom House employs primarily Cognitive Behavioral and Dialectical Behavioral therapeutic modalities in conjunction with a positive reinforcement derivation of a token economy within the residential milieu. Each client has a customized treatment plan, and certain clients have additional behavior modification rubrics in place in an effort to maximize their adaptive community functioning and meaningful therapeutic focus. All clients are supported in the completion of a standardized (or adapted, as indicated), sequential array of therapeutic objectives prior to ultimate assessment for discharge. The following findings relate to treatment impact:

- Highly significant statistical (p<.01) and clinical gains occurring between pretest and posttest measures of dynamic/functional factors were determined in the areas of *sexual recidivism risk, peer closeness, sexual preoccupation, attitudes supportive of sexual offending, use of cognitive distortions,* and *deviant sexual interest in children* (objective measurement).

- Moderate significance (.01<*p*≤.05) was also determined in the treatment areas of *peer group quality* and *functional empathy.* Considering the primacy of these areas of therapeutic focus in the inherent treatment goals of our program and the relevance of these particular variables to recidivism risk, these results are taken as validating the current clinical approaches being taken, as well as validating the preexisting assumption that our specialized treatment for sexually problematic youth is effective.

- Non-significant improvement was determined for *family functioning, impulse control,* and *emotional regulation.* Related to all three variables, very small sample sizes reflecting the recentness (2013) of their being measured suggest an as of yet inconclusive implication for treatment impact, compared to the aforementioned variables of strong impact that have collectively been measured for a longer interval of time.

Findings relating the posttest status of dynamic/functional variables to *length of stay* provide only a correlational level of inference; nonetheless, it is notable that all of the significant findings related to longer *lengths of stay* reflected reduced risk and/or higher functioning:

- A highly significant (*p*=.01) relationship between longer length of stay and *family involvement* was determined, with significant connections made (.01>*p*≤.05) between longer stays and lower *sexual recidivism risk, deviant sexual interest in children* (objective), *deviant sexual interest in force* (objective), and *sexual preoccupation.*

- No significant negative findings were related to longer lengths of stay. Subsequent investigations would do well to utilize various analyses of variance to set the groundwork for more definitive, causative inference.

Client characteristics that relate to greater treatment impact in the core area of *sexual recidivism risk* include that of lower levels of *antisocial orientation,* lower levels of *aggression,* positive *special education status,* and a lower *verbal IQ.* In a factor cluster model including *self esteem, aggression,* and *antisocial orientation,* the latter variable clearly predicted overall higher *sexual recidivism* risk at time of discharge. Related to *peer group quality,* factors predicting increased treatment gain include *lower full scale IQs and a* positive *special education status.* Improvements as measured by the reduction in use of *cognitive distortion* were greatest for individuals with lower numbers of *experienced trauma types,* probably due to an increased role of cognitive distortions within highly traumatized clients' survival scheme prior to treatment. Individuals who were rated lower in terms of *potential for substance abuse* also appeared to reduce their use of cognitive distortion more significantly than their ostensibly self-deceiving counterparts. Individuals with stronger *antisocial* features also demonstrated greater gains in this area of treatment, be it due to their enhanced ability to strategically present with fewer distortions in the context of treatment, or perhaps due to regression to the mean following more extremely problematic measures of their *cognitive distortion* at the time of intake (or both). Of similar note, *functional empathy* improvements were greater for the more *antisocial* clients, with our institutional experience suggesting that this finding may be a combination of an instrumental approach to satisfying treatment requirements as well as legitimate improvements in empathic responding found for those who enter our program possessing antisocial behaviors, but not a true sociopathic 'agenda'.

Client Outcomes

'Quality of life' outcomes, for our purposes, include lifestyle, environmental, and resource factors facing our clients:

- A successful graduation rate of 73% was determined based upon admission and discharge statistics spanning the past five years. Thus, a standard 'Failure to Adjust' rate near 10% over the course of Mathom House's 28-year history has notably increased of late. It is suggested that this result be attributed to increasingly poorer behavioral regulation and lower levels of functioning among clients who are being

referred to our level of care. In response to our changing population, increased emphasis has been placed on training all staff in the methods of de-escalation as part of a broader movement toward enacting a 'Sanctuary Model' with fidelity.

- In **80%** (n=16) of non-treatment completion cases, transfer to another residential treatment facility occurred. The remaining, (n=4) were transferred to secure, non-treatment facilities.

- Individuals displaying end of treatment reductions in *attitudes supportive of sexual offending* did not fare better *educationally or occupationally*, but those who showed the most improvement in this area do demonstrate higher levels of *educational or occupational functioning*. Please see *Table 15* for a full description of qualitative outcomes.

Non-treatment (preexisting) factors that related to increased *length of stay* were determined to include higher *numbers of trauma types experienced* as well as higher *neighborhood income*. Without a contextual basis to interpret the latter variable, it is suggested that those clients presenting with increased traumatic experience require additional therapeutic interventions that arguably play both treatment 'pre-requisite' and 'progress maintenance' roles.

Historically low rates of founded recidivism (3.7% over a 17 year longitudinal study) following treatment at Mathom House, as well as current and recent findings of 0% reported recidivism must be interpreted with much skepticism. Pennsylvania regulations include that any legal data about Juveniles who have not received a felony offense are, by default, not distributed to providers who directly access the public portals, leading to a deflation in the representation in the categories of misdemeanor convictions and juveniles who have not recidivated that previously carried only a misdemeanor charge. It is also conventional knowledge that a majority of sexual offenses are never formally reported by the involved victims, furthering the underreporting of such crimes. Related to Mathom House, several felonious sexual offense charges are known to have been filed against at least one treatment non-completer since January 1, 2014 (following our sampling interval); conviction is deferred to court (forthcoming). Two successful graduates are also known to have received sexual offense-related charges; there is yet no information regarding conviction on these charges.

Given this reality, comparisons of recidivism among treatment providers offer an incrementally more valuable index of program success. Similarly, comparisons between successful treatment completers and non-treatment completers at Mathom House, to the extent that subgroup differences are significant, may offer information of some value. Based upon recidivism rates for 51 graduates (41 successful, 10 unsuccessful) spanning the last five years, a total recidivism (all crime types) rate of 12.2% and 30.0% are indicated, respectively. Please see *Table 14* for a detailed breakdown of program recidivism outcomes. Inferentially, improvements in *peer closeness* were significantly related to lower recidivism (all crime types). Considering that *peer closeness* is generally held, in its inverse form (*lack of intimate peer relationships*) as the foremost risk factor in sexual recidivism, the finding is not surprising to the extent that sexual and general recidivism risk factors are similar. Unexpectedly come the findings that *deviant sexual interest in children (objective)* and *sexual preoccupation* were negatively correlated to recidivism ($p=-.02$, $p=-.01$ respectively), with widespread recognition of the difficulties inherent in correlating low-frequency outcomes (such as reported recidivism), but possibly representing evidence against this notion of sexual recidivism and general criminogenic (non-sexual) risk factor overlap. Because of the inherently low incidence of reported recidivisms across this (and most) treatment population(s), inferences regarding significant relationships between *specific* crime categories and other variables, given our current limited sample size, are likely to be realized in subsequent analyses.

Treatment Implications

With the primary purpose of the current research endeavor being that of gleaning clinically-relevant information to ultimately guide assessment and treatment modifications within our program, these early implications are suggested:

- Beginning at the initial contact (interview) with prospective clients, attention paid to a longstanding history of peer disconnection and/or particularly criminogenic peer associations is legitimized based upon the poor treatment success rate for these individuals. Conceptualization of this client feature would best involve a differentiation between situational/reactive versus characterological/personality contributors. Client responses to early intervention with social skill-building modules will have diagnostic value related to their treatment fit prognosis. Non-improvement following detection and

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intervention can be seen in the context of milieu and treatment behaviors to more quickly determine whether treatment options at Mathom House continue to be appropriate. Stage of change measurement utilizing the URICA has already commenced, to aid in this assessment as well as to add additional data to subsequent annual analyses.

- For individuals with significant antisocial personality features, early determination to ascertain the level of sociopathic crystallization (particularly in the case of older program candidates) will enable staff to design treatment plans that focus on adaptive interpersonal rehearsal and are based less upon an assumption of repressed empathy. For those who present with antisocial behaviors but may or may not possess a sociopathic agenda, assessment that includes clinical interviewing in combination with a multi-construct measure such as the Personality Assessment Inventory (PAI, PAI-A) may be helpful in clarifying etiology and thus treatment approach and outcome prognosis.

- Our program's current assimilation of trauma-specific approaches (TF-CBT, DBT, EMDR, Traumatic Stress Group, Trauma-Sensitive Yoga) appears to be justified by the fact that our treatment population, on average, falls within the most severe 10% with regard to trauma history. Additionally, the most traumatized of our clients appear to require some or all of these interventions in addition to the standardized curriculum that addresses their sexually problematic behavior, resulting in a slightly longer average length of stay. The high traumatization rate also supports continued utilization and refinement of the sanctuary model principles enacted by milieu staff.

- Highly significant improvements in the area of sexual recidivism risk support our current standardized treatment curriculum for sexually problematic behavior, such that the finer measures underlying this construct (such as the 14 dynamic ratings of the ERASOR) may better inform any potential changes of treatment emphasis on a programmatic level. Using these treatment targets as a supplement to treatment plan creation has, to some extent, already been put into practice, though this aspect can be made increasingly programmatic. Recent research suggests that the ERASOR ratings do strongly correlate to actual recidivism, strengthening the justification for using these dynamic items in treatment planning.

Annually, the RORE process is refined by means of administrative meetings, collaboration with the company-wide Performance Quality Improvement (PQI) administrator, and through annual pre-execution consultation with an expert in statistical formulation and data interpretation. The RORE's effectiveness as a means to determining clinical accountability is ultimately based upon the quality of information delivered relevant to the identified variables and treatment/outcome questions of interest.

Project Evaluation and Recommendations for Future Consideration

As also reflected within the (attached) annual RTICO report (2014):

Beyond the limitations based upon sample size that will resolve as a product of time and continual, operationalized data collection, it became apparent to the investigator that it will be helpful in subsequent investigations to include diagnostic subgroups, as well as grouping based upon offense type (known to the court and gleaned by our clinicians). These represent very basic and relevant factors that are widely researched and accepted constructs. In this vein, racial, ethnic, and assigned therapist influences upon treatment impact might also be explored.

Most statistical analyses used in examining our client population at Mathom House could not, unfortunately, be executed in the exploration of treatment and outcome factors at Easton Manor (a less restrictive residential treatment program that largely facilitates Mathom House graduates' community reentry), as the smaller sample and shorter treatment duration did not meet subject and data robustness thresholds, relegating analysis almost entirely to the descriptive level. It is, again, anticipated that continual adherence to Manualized data collection (resulting in increasing sample sizes) will enable inferential analysis for Easton Manor's clinical programming.

With relation to the date result tables, clarifying variable 'directionality' may be of help in the readers' ability to comprehend tabulated data; due to our field's tendency to measure pathology rather than health, static and dynamic variables (not to mention change scores) often receive higher numeric values when a behavior or symptom is or becomes more severe. A minority of measures reflect the reverse phenomenon. As the current study tables do not discriminate directionality amongst the variables, transforming certain variables to create a uniform measurement direction is indicated.

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Of primary relevance to measuring client outcomes specific to general and sexual offense-specific recidivism, a continued effort is being, and must be continued to be made toward collaboration with County Probation Departments in an effort to glean accurate recidivism data for juveniles by means of data bases that do not 'cloak' misdemeanor adjudications as would be the case within public domain criminal record checks. This effort is underway, currently, and has gained the support of key state-level officials.

Stakeholders and Involved Parties

Edison Court Clinical Director (Jonathan Roberds, Psy.D.): Preliminary Research for, Development of, and content/process analysis and evaluation of the RORE Project

Edison Court Administration: Supporting the Clinical Director in allowing for the RORE Project Initiative

Doctoral Psychology Externs: Psychological Evaluation, Data Collection, Assessment Scoring, Assessment Interpretation, Data Entry (Excel), assistance in Data Analysis

Residential Supervisory Staff: Completion of various standardized and program-specific rating measures

Residential Child Care Worker Staff: Completion of various standardized and program-specific rating measures

Residential Clinical Therapists: Completion of various clinical rating scales, risk assessments, and program-specific rating measures

Residential Administrative Staff: supporting the management of residential context subset of data collection

Doctoral Psychology Interns: Supporting the initial project design, and consultation within their statistical expertise

Families of Residential Clients: Participating within Family Therapy and completing self-assessment measures

Magellan Behavioral Health: Supporting our endeavor to improve clinical programming effectiveness and efficiency

Regional Municipal Courts: Ongoing collaboration on initiatives that increase system diversion and public health

Juvenile Court Judges' Commission: Facilitating Provider collaboration with Local Juvenile Probation Departments to Increase the Fidelity of Recidivism Data

ECI Residential Clients: Willingly participating within psychological assessment and consenting to the RORE for the benefit of our research endeavor as well as supporting their own clinical interests

Project developments since implementation, including plans for leveraging additional resources

Having completed one annual process cycle (as depicted by our Clinical Evaluation Logic Model, attached), our current (2015) annual RORE initiative reflects the recommendations stated from the aforementioned 2014 recommendations, as well as the addition of more variables of interest. Specifically, all relevant DSM-5 diagnoses, numerous clinical subscales from already-implemented psychological assessments, sexual offense types

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and interaction strategies, and a discernment between static and dynamic sexual recidivism risk factors are now being measured (to be reported in our 2015 report). Mid-treatment status variables have also been added, by request of one funder. In total, 201 variables will be examined this year for our current and subsequent discharged clients.

With relevance to ECI's attempt to glean, analyze, and report accurate reports of our discharged clients' recidivism, Clinical Director Dr. Roberds and CEO John Deppeler have recently engaged a process with key state officials and local probation departments in an attempt to collaborate in creating a time efficient process of client outcome data sharing that is likely to be enhanced using the courts' juvenile justice database system as well as the Common Pleas Case Management System (CPCMS/criminal justice system). Preliminary indications for this novel, multi-system collaboration appear to be promising.

A description of any costs associated with the project and how it was funded; cost savings, if any, and any community response

ECI's utilization of doctoral psychology students reflects a symbiotic service wherein students gain valuable assessment, research, and clinical accountability experience while providing a specialized data-collection service to our residential programs. As externs, there is no stipend paid, and thus no cost to our program and/or funders. Our use of in-house trainees to enact the RORE translates to approximately 500 annual hours of data processing by students who have received accredited training in a majority of the RORE assessment and/or assessment formats, minimizing time expense by the Clinical Director for the purpose of training students in the technical aspects of test administration. Additionally, the RORE capitalizes on students' data collection using ECI's Electronic Health Record Database, as well as regularly occurring assessments that have long taken place on a programmatic level. Based upon an assumed rate of $80.00 USD per hour for research support services, an annual savings of approximately $40,000.00 is estimated.

One of our Managed Care Organization funders has expressed an interest in our RORE project, and requested that we send to them our annual RTICO report. We were lauded for our undertaking of such a broad and deep look into our clinical accountability, and initial feedback following our 2014 report included a request that we add 'mid-treatment' status outcomes, that specifically include *age at transition to Advanced Group, Sexual Recidivism Risk Level, Level of Family Involvement, Level of Family Functioning, and Client 'Stage of Change' with regard to addressing Sexually Problematic Behavior.*

Using our RORE as a best-practices model, ECI was asked to offer a presentation relating to clinical accountability at the upcoming PCCYFS Spring Conference (corresponding PowerPoint attached). ECI has been told by several oversight bodies that we may be unparalleled with regard to moving beyond treatment outputs and client outcomes to the incorporation of conventional statistical analysis of treatment impact. In addition, as was mentioned in the prior section, key state-level court administrators have recently embraced ECI's RORE project, indicating their support in facilitating our endeavor to collaborate with local probation departments to the end of gaining accurate recidivism data in the broader mission of improving clinical accountability and ultimately protecting our communities.

On behalf of Edison Court, Inc., I thank you for your consideration of the RORE project for the Best Practices Award.

Descriptive Statistics Related to our Treatment Population

Demographic and stable (cognitive, personality) data serve to characterize our residential client population. With the sample ranging in age from 12.4 to 19.5 years at time of admission, the average age for an incoming resident at Mathom House is 16.0 years. Using a public, web-based database (citydata.com), it was determined that our clients, primarily hailing from Bucks, Montgomery, Delaware, and Philadelphia Counties, are fairly representative of the stratified levels of local (median) household income, with this statistic ranging from sub-poverty categories to the top 2%. The average of household incomes determined for our population is $62,839, as compared to a four-county average income of $60,287.

In terms of personality profiling, our population reflects average-range t-scores with borderline but not clinically significant elevation found on the Psychopathic Deviate scale of the MMPI and MMPI-A (or the ANT scale of the PAI, PAI-A). The most common MMPI and MMPI-A elevations were found (most frequent to least) on scales 4 (Psychopathic Deviate), 7 (Psychasthenia), 6 (Paranoid), 8 (Schizophrenia) and 9 (Hypomania). Please refer to *Table 3* for details.

Table 1. Specific Demographic variables related to our population.

Variable	N	Mean	Standard Deviation	Range
Age at Time of Admission (in years)	104	16.0	1.69	12.4–19.5
Neighborhood Income (in U.S. dollars)	86	$62,839.	$31,955.	$13,625.–$170,625.

Table 2. Specific Experiential variables related to our population

Variable	N	Mean	Standard Deviation	Percentage
Receives Special Education	93			46
Number of Trauma Types Experienced	14	5 (4.93)	3 (2.81)	

Table 3. Specific Stable variables related to our population

Variable	N	Mean	Standard Deviation	Percentage of group
Full Scale IQ	79	95.76	14.45	
Verbal Comprehension IQ	72	96.11	16.84	
Perceptual Organization IQ	69	98.99	14.96	
Working Memory Index	55	98.51	16.13	
Processing Speed Index	60	90.55	16.09	
Antisocial Orientation (t Score)	45	59.64	11.87	
Self Esteem (t Score)	46	54.43	12.24	
Aggression (t Score)	42	55.64	12.97	
Potential for Substance Abuse (range)	79	*Average*	*One Risk Level*	
Elevation (T≥65) on MMPI Scale 1	46			0
Elevation (T≥65) on MMPI Scale 2	46			15
Elevation (T≥65) on MMPI Scale 3	46			4
Elevation (T≥65) on MMPI Scale 4	46			33
Elevation (T≥65) on MMPI Scale 5	46			2
Elevation (T≥65) on MMPI Scale 6	46			22
Elevation (T≥65) on MMPI Scale 7	46			24
Elevation (T≥65) on MMPI Scale 8	46			20
Elevation (T≥65) on MMPI Scale 9	46			20
Elevation (T≥65) on MMPI Scale 10	46			4

Significant Findings related to our Treatment Population

Forty-six percent of our clients received special education services of any kind, compared to a national average rate of this service falling at 13%. Using a one sample t-test, an average Verbal Comprehension Index of 96.11 and Processing Speed Index of 90.55 within our served population reflect a significant statistical deviation from the general population, although only the latter represents a notable deviation ($p=.05$, $p<.01$ respectively). Perhaps more intriguing was the finding of a similar result for this group when their Processing Speed Index score was compared to the average of their other cognitive indexes (Verbal Comprehension, Perceptual Organization, Working Memory) using 97.87 as a sample statistic, illuminating a significant relative deficit in this area of intellectual functioning across our subpopulation.

Table 4. One-Sample T Test: Comparisons of our Treatment Population to the General Population: Selected Variables

Variable	N	Sample Mean	Population Mean (4 county Region)	Significance (2-tailed)
Neighborhood Income	86	$62,838.95	$60,286.50	.43
Verbal Comprehension IQ	72	96.11	100.00	.05*
Processing Speed Index	60	90.55	100.00	.00**

* significance reached (p≤.05)
** significance reached (p≤.01)

Table 5. One-Sample T Test: Within Significant Findings within our Treatment Sample

Variable	N	Sample Mean	Sample Statistic (Other 3 Indexes)	Significance (2-tailed)
Processing Speed Index	60	90.55	97.87	.00**

** significance reached (p≤.01)

Descriptive: Clients at Treatment Beginning and End

For our purposes, distinguishing clinically significant treatment impact findings from statistically significant ones will be based upon categorical shifts in ratings of psychological functioning from Beginning of Treatment (Pretest) to End of Treatment (Posttest). Given this premise, change scores were calculated, indicating categorical improvements for our population in the areas of Peer Group Quality, Family Functioning, Meaningful Peer Relationships, Deviant Sexual Interest in Children (Objective), Sexual Preoccupation, Attitudes Supportive of Sexual Offending, and Functional Empathy (based upon tendencies of responding to others' needs).

Table 6. Pretest and Posttest Mean Differences (Change Scores) for Selected Variables
Note: Only treatment graduates who have data from both sampling periods are included; this 2009-2013 sample was measured according to current protocol beginning in October of 2013.

Variable	N	Change Score (Posttest-Pretest)*	Clinical Significance (Categorical Change)
Peer Group Quality	19	.42	Y
Functional Behavior	9	.00	N
Externalizing	2	.00	N
Internalizing	2	.00	N
Family Involvement	2	.00	N
Family Functioning	2	.50	Y
Peer Closeness	47	-.22	Y
Deviant Sexual Interest: Child – Objective	31	-.32	Y
Deviant Sexual Interest: Force – Objective	31	-.13	N
Deviant Sexual Interest: Child – Subjective	27	.00	N
Deviant Sexual Interest: Force – Subjective	27	-.19	N
Difficulty Related to Deviant Sexual Interest	4	.00	N
Sexual Preoccupation	44	-.28	Y
Emotional Regulation	6	-4.17	N
Attitude Supportive of Sexual Offending	39	-.47	Y
Level of Cognitive Distortion	39	-.26	Y
Functional Empathy	19	.42	Y

* + or - directionality of change may or may not represent improvement, depending upon the variable

Table 7. Paired Samples T Test: Sexual Recidivism Risk (assumes parametric criteria)

Variable	N	Mean Paired Difference	Standard Deviation	t	Significance (2-Tailed)
Sexual Recidivism Risk	53	.14	.13	7.71	.00**

** *significance reached (p≤.01)*

Relationship of Treatment Completion to Treatment Effectiveness

Perhaps of most relevance among our treatment impact findings, given our setting, was a significant reduction in Sexual Recidivism Risk scores, determined by both using a paired samples t-test (M=.14, SD=.13) (t=7.71, p<.01) and a Wilcoxon matched pairs test (p<.01) to represent both parametric and non-parametric assumptions, respectively. The latter statistic is more appropriate given the unstandardized nature of the ERASOR assessment from which scores of Sexual Recidivism Risk are derived. Categorically, our clients tend to fall within a Moderate risk level for such recidivism upon their arrival, and tend to fall within the Low-

Moderate range at time of discharge from successful treatment completion. Using the non-parametric approach, statistically significant improvements were also found in the areas of Peer Group Quality (p=.02), Peer Closeness (p<.01), Deviant Sexual Interest in Children (Objective) (p<.01), Subjective reports of Deviant Sexual Interest in Force (p=.03), Sexual Preoccupation (p<.01), Attitudes Supportive of Sexual Offending (p<.01), and Functional Empathy (p=.05).

Tables 8 & 9. Wilcoxon Matched Pairs Test: Inferential Statistical and Clinical Difference between Beginning of Treatment and End of Treatment Measures for Dynamic Variables (non-parametric)

Table 8. Ranks

Variable (Pretest and Posttest)	Ties (N)	Total N
Peer Group Quality	17	26
Family Involvement	2	2
Family Functioning	0	2
Sexual Recidivism Risk	3	53
Peer Closeness	29	52
Deviant Sexual Interest: Child – Objective	24	35
Deviant Sexual Interest: Force – Objective	27	34
Deviant Sexual Interest: Child – Subjective	29	31
Deviant Sexual Interest: Force – Subjective	26	31
Difficulty Related to Deviant Sexual Interest	5	5
Sexual Preoccupation	20	49
Emotional Regulation	4	7
Attitude Supportive of Sexual Offending	17	43
Level of Cognitive Distortion	20	44
Functional Empathy	13	26

Table 9. Test Statistics

Variable (Pretest to Posttest)	Z	Significance (2-Tailed)
Peer Group Quality	-2.31	.02*
Family Involvement	N/A	N/A
Family Functioning	-.45	.65
Sexual Recidivism Risk	-5.64	.00**
Peer Closeness	-3.54	.00**
Deviant Sexual Interest: Child – Objective	-3.32	.00**
Deviant Sexual Interest: Force – Objective	-1.89	.06
Deviant Sexual Interest: Child – Subjective	.00	1.00
Deviant Sexual Interest: Force – Subjective	-2.24	.03*
Difficulty Related to Deviant Sexual Interest	N/A	N/A
Sexual Preoccupation	-3.90	.00**
Response Inhibition	-1.00	.32
Emotional Regulation	-.53	.59
Attitude Supportive of Sexual Offending	-4.56	00**
Level of Cognitive Distortion	-3.65	.00**
Functional Empathy	-2.00	.05*

* *significance reached (p≤.05)*
** *significance reached (p≤.01)*

Relationship of Static Client Variables to Treatment Effectiveness

When End of Treatment Sexual Recidivism Risk was predicted using a Linear Regression model, it was found that Antisocial Orientation (B=.43, p=.04) was a significant predictor, with higher Antisocial Orientation scores predicting higher end of treatment Sexual Recidivism Risk scores. Self Esteem and Aggression did not significantly aid the prediction model.

Table 10. Linear Regression: Personality Traits as a Predictor of Sexual Recidivism Risk at Time of Discharge

	Unstandardized Coefficients		Standardized Coefficients	t	Significance
	B	Standard Error	Beta		
(Constant)	.21	.10	.00	2.02	.05
Antisocial Orientation	.00	.00	.43	2.17	.04*
Self Esteem	.00	.00	-.17	-.95	.35
Aggression	.00	.00	.00	-.02	.99

* *significance reached (p≤.05)*

Relationship of Length of Stay to Treatment Effectiveness

Because of the non-parametric nature on all but one (Response Inhibition) of the 16 dynamic variables that represent treatment targets, Spearman correlations were utilized in determining relationships between end of treatment statuses (as well as pretest – posttest change scores) and length of stay. To this end, a significant positive relationship was suggested to exist between increased length of stay and Family Involvement (p=.01). Longer Lengths of Stay were associated with lower Sexual Recidivism Risk (p=-.02), lower Deviant Sexual Interest in Children (Objective) (p=-.02), lower Deviant Sexual Interest in Force (p=-.03), and lower Sexual Preoccupation ratings (p=-.05).

Table 11. Spearman Correlations: Length of Stay and Dynamic Factors (End of Treatment and Change Scores)

Treatment Length of Stay and	Value Spear.	Pears.
Peer Group Quality	-.14	
Change Score: Peer Group Quality	.14	
Functional Behavior	-.18	
Externalizing	.29	
Internalizing	-.35	
Family Involvement	.01**	
Family Functioning	.11	
Change Score: Family Functioning	1.00	
Sexual Recidivism Risk	-.02*	-.07
Change Score: Sexual Recidivism Risk	.09	.11
Peer Closeness	-.08	
Change Score: Peer Closeness	-09	
Deviant Sexual Interest: Child - Objective	-.02*	
Change Score: Deviant Sexual Interest: Child – Objective	.13	
Deviant Sexual Interest: Force – Objective	-.03*	
Change Score: Deviant Sexual Interest: Force – Objective	-.11	
Deviant Sexual Interest: Child – Subjective	-.23	
Change Score: Deviant Sexual Interest: Child – Subjective	-.16	
Deviant Sexual Interest: Force – Subjective	-.23	
Change Score: Deviant Sexual Interest: Force – Subjective	-.24	
Difficulty Related to Deviant Sexual Interest	-.26	
Sexual Preoccupation	-.05*	
Change Score: Sexual Preoccupation	.11	
Response Inhibition		-.42
Emotional Regulation	.36	
Change Score: Emotional Regulation	.34	
Attitude Supportive of Sexual Offending	-.18	
Change Score: Attitude Supportive of Sexual Offending	.08	
Level of Cognitive Distortion	-.08	
Change Score: Level of Cognitive Distortion	-.10	
Functional Empathy	-.50	
Change Score: Functional Empathy	-.10	

* significance reached (p≤.05)
** significance reached (p≤.01)

An independent samples t-test compared mean differences of 'short' (<730 days) and 'long' (≥730 days) Lengths of Stay on measures that met parametric assumptions. Among the financial, criminogenic, and behavioral variables examined, the only significant finding was that clients who stayed longer tended to score higher in terms of their Perceptual Organization (visual comprehension ability) (p=.03). Though this may seem counterintuitive, it may be relevant to note that the Processing Speeds and Working Memory abilities of this group were slightly poorer than those measured within the 'short' Length of Stay subgroup; it would ostensibly be the case that these two areas would cause the most variance of Length of Stay among the cognitive variables.

Table 12. Independent Samples T-Test: Comparison of Faster vs. Slower Finishers on Static and Dynamic Factors

Variable	LOS Group (in days)	N	Mean	Levene's Test for Equality of Variances Significance	Significance (2-Tailed)
Age at Admission	≥730	43	5701.98		
Age at Admission	<730	61	5930.98	N	.06
Neighborhood Income	≥730	34	$60,787.91.		
Neighborhood Income	<730	52	$64,180.02.	N	.63
Full Scale IQ	≥730	34	97.68		
Full Scale IQ	<730	45	94.31	N	.31
Verbal Comprehension IQ	≥730	32	98.47		
Verbal Comprehension IQ	<730	40	94.22	N	.29
Perceptual Organization IQ	≥730	29	103.55		
Perceptual Organization IQ	<730	40	95.68	N	.03*
Working Memory Index	≥730	22	97.23		
Working Memory Index	<730	33	99.36	N	.63
Processing Speed Index	≥730	26	88.12		
Processing Speed Index	<730	34	92.41	N	.31
Sexual Recidivism Risk (Beg.)	≥730	26	.49		
Sexual Recidivism Risk (Beg.)	<730	44	.52	Y	.35
Sexual Recidivism Risk (End)	≥730	36	.35		
Sexual Recidivism Risk (End)	<730	35	.40	Y	.06
Response Inhibition Risk (End)	≥730	10	82.00		
Response Inhibition Risk (End)	<730	16	90.56	N	.36
Emotion Regulation Risk (End)	≥730	13	83.54		
Emotion Regulation Risk (End)	<730	9	77.44	N	.37

* *significance reached (p≤.05)*

Demographic, Cognitive, and Personality variables were correlated to the change scores of dynamic variables (constituting indexes of treatment gain). Overall, 10 of the 19 areas of treatment gain were significantly related to pre-existing phenomena. Specifically, Self Esteem, Aggression, Full Scale IQ , Processing Speed Index, and Special Education Status were most commonly related to treatment change scores (4 correlations). Neighborhood Income, Verbal Comprehension Index, and Potential for Substance Abuse were each correlated to 3 change scores, with Age at Admission, Antisocial Orientation, and Working Memory Index being correlated to 2 change scores apiece. Perceptual Organization Index and Number of Trauma Types Experiences were correlated to 1 change score each. With reference to *Table 13*, a mix of positive and negative Spearman and Pearson's R correlations yielded several notable findings, including that higher Full Scale IQs appear to be related to diminished changes in Peer group Quality and Sexual Preoccupation through treatment (p=-.01), with increased gains made in reducing their Level of Cognitive Distortion (p=-.03). Higher Verbal Comprehension IQs related to less improvement in overall Sexual Recidivism Risk (p=.02). Lower gains in the reduction of Sexual Recidivism Risk were found for those with higher Aggression (p=.01) and Antisocial Orientation (p=.02). Interestingly, improvements in Functional Empathy across treatment related strongly to higher levels of Antisocial Orientation (p=.04), possibly due to the 'floor effect' of clients' scoring higher on measures of Antisocial Orientation at the time of initial Functional Empathy measurement followed by an expected regression to the mean at posttest. Positive treatment changes were notable for the Special Education subpopulation in the areas of Peer Group Quality (p=.05), Sexual Recidivism Risk (p=-.02), and particularly Objective Sexual Interest in Children (p=.01). Individuals with higher numbers of Experienced Trauma Types appeared to respond less readily to treatment intervention addressing Cognitive Distortion (p=.02), with conventional assumption providing an increased role of cognitive distortions within clients' survival scheme pre-treatment. With regard to individuals who were rated has being at higher Potential for Substance Abuse, a similar diminution of improvement in Level of Cognitive Distortion was noted (p=.03).

Table 13. Spearman Correlations: Dynamic Change Scores and Historical/Stable Factors
note: only significant correlations are listed

Variable	Correlated Variable	N	Value Spear.	Pear.
Change Score: Peer Group Quality	Age at Admission	19	.04*	
	Special Education	18	.05*	
	Full Scale IQ	17	-.01*	
	Processing Speed Index	14	-.03*	
	Potential for Substance Abuse	19	-.03*	
	Aggression	15	.00**	
Change Score: Sexual Recidivism Risk	Special Education	43	-.02*	
	Verbal Comprehension IQ	41	.02*	.05*
	Antisocial Orientation	32	.02*	.04*
	Potential for Substance Abuse	42	.05*	
	Aggression	29	.01**	.04*
Change Score: Deviant Sexual Interest: Child – Objective	Special Education	27	.01**	
Change Score: Deviant Sexual Interest: Force – Objective	Self Esteem	21	-.05*	
Change Score: Deviant Sexual Interest: Child – Subjective	Age at Admission	27	-.02*	
	Processing Speed Index	20	.00*	
Change Score: Deviant Sexual Interest: Force – Subjective	Neighborhood Income	26	.01**	
	Full Scale IQ	23	-.03*	
	Self Esteem	18	.05*	
	Aggression	18	.05*	
Change Score: Sexual Preoccupation	Full Scale IQ	37	.01**	
	Verbal Comprehension IQ	37	.01**	
	Perceptual Organization IQ	35	-.04*	
	Processing Speed Index	34	-.04*	
	Self Esteem	31	-.05*	
Change Score: Attitude Supportive of Sexual Offending	Neighborhood Income	36	-.02*	
	Special Education	35	.01**	
	Self Esteem	28	.01**	
	Aggression	26	-.04*	
Change Score: Level of Cognitive Distortion	Neighborhood Income	36	-.03*	
	Number of Trauma Types Experienced	8	.02*	
	Full Scale IQ	34	-.03*	
	Verbal Comprehension IQ	34	.05*	
	Working Memory Index	26	.03*	
	Potential for Substance Abuse	33	.03*	
	Processing Speed Index	14	-.02*	
Change Score: Functional Empathy	Antisocial Orientation	15	.04*	
	Working Memory Index	13	.04*	

* significance reached (p≤.05)
** significance reached (p≤.01)

Descriptive Statistics related to Sexual and General Recidivism Outcomes

In terms of reported sexual and non-sexual recidivism rates for our five-year sample of treatment graduates and non-completers, it becomes important to place the proper context of limitations to available data in this regard. Beyond the well-known determination that most victims of sexual assault do not report their victimization, under standard circumstances, a direct request to the State of Pennsylvania for legal data involves a default blocking of criminal information in the case of any Juveniles who have not received a felony offense, leading to a deflation in the representation of the categories of misdemeanor convictions as well as information about juveniles who have not recidivated that previously carried only a misdemeanor charge. These limitations as well as county policies that may further affect release of actuarial legal information on juveniles underpin the need for increased collaboration between providers and legal bodies, to allow for a more unfettered access to actuarial crime statistics that conforms to the pertinent legal and ethical codes. In our case, it is appropriate to mention that several felonious sexual offense charges are known to have been filed against at least one treatment non-completer since January 1, 2014 (following our sampling interval), with possible conviction being deferred to court (forthcoming). Further, though conviction information is pending, two additional program graduates are known to have received sexual offense-related charges. Based upon the limited data received via Pennsylvania Criminal Record Checks (104 records requested, 51 received), 12.2% of our treatment completers were found to have committed any type of crime (misdemeanor, felony), with 1 case of sexual misdemeanor (prostitution) representing 2.4% of the sample (n=41), two cases apiece of non-sexual misdemeanors and non-sexual felonies (4.9% of subgroup each), and no reported sexual felonies (0% of subsample). Among the non-treatment completers (n=10), 30% committed any type of crime, specifically based upon 1 non-completer who committed a non-sexual felony (10% of the sample), and two individuals who committed non-sexual misdemeanors (20% of the sample). Please refer to *table 14* for a visual iteration of the findings as well as the relevant disclaimers.

Table 14. Sexual and General Recidivism Reported between January 1, 2009 and December 31, 2013

Note: Under standard circumstances, a direct request to the State of Pennsylvania for legal data involves a default blocking of criminal information in the case of any Juveniles who have not received a felony offense, leading to a deflation in the representation of the categories of misdemeanor convictions as well as information about juveniles who have not recidivated that previously carried only a misdemeanor charge.

	N	Number of Offenders	Percentage of Group
Treatment Completers	41		100.0
Completers who have Recidivated Sexually: Felony		0**	0.0**
Completers who have Recidivated Sexually: Misdemeanor		1**	2.4**
Completers who have Recidivated Non-Sexually: Felony		2	4.9
Completers who have Recidivated Non-Sexually: Misdemeanor		2	4.9
Completers: Total Recidivism		5**	12.2**
Completers with No Reported Recidivism		36**	87.8**
Treatment Non-Completers	10		100.0
Non-Completers who have Recidivated Sexually: Felony		0*	0.0*
Non-Completers who have Recidivated Sexually: Misdemeanor		0	0.0
Non-Completers who have Recidivated Non-Sexually: Felony		1	10.0
Non-Completers who have Recidivated Non-Sexually: Misdemeanor		2	20.0
Non-Completers: Total Recidivism		3*	30.0*
Non-Completers with No Reported Recidivism		7*	70.0*

* Several felonious sexual offense charges are known to have been filed against at least one treatment non-completer since January 1, 2014 (following our sampling interval); conviction is deferred to court (forthcoming)
** Two successful graduates are known to have received sexual offense-related charges; there is yet no information regarding conviction on these charges

Descriptive Statistics related to Quality of Life Outcomes

Quality of Life indexes that included Family Reunification, Residential Stability, Discharge Location Quality, Education/Occupation Status, and Mental Health ratings at time of discharge were analyzed descriptively and inferentially. 26% of clients, regardless of treatment completion, were reunified with their family homes following discharge from Mathom House. Of the 74% not reunified, most were placed in a group home level of care or community reentry facility specializing in sexually problematic behavior. Specifically, with regard to Discharge Location, 49% were placed at this level, 24% moved into a family home or independent living, a collective 23% were incarcerated or transferred to another residential treatment program (n=4; 16, respectively), and 3% moved to a college dorm. A related construct, Residential Stability,

showed 97% of our ex-clients living in a temporary but stable residence (this includes family homes), 2% immediately began renting an apartment, and 1% (1 non-graduating client) are homeless or at least are known to be missing.

Table 15. Quality of Life Outcomes: Status Ratings at Time of Discharge (Completers and Non-Completers)

Life Domain	N	Percent of Sample by Status (rounded to whole numbers)			
Family Reunification	88	Family Reunified		Family Not Reunified (may reflect Independence)	
		26		74	
Residential Stability	87	Rent/Own Residence	Temporary, Stable	Temporary, Non-stable	Homeless or Missing
		2	97	0	1
Discharge Location Quality	87	Community, Independent	College Dorm	Group Home	Residential Facility
		24	3	49	23
Education or Occupation Status	87	In College (or) Diploma (or) held Job for > 1 year	In High School (or) held Job for ≤ 1 year	Plan for Training or Occupation	Dropout and no Job Plan
		5	67	26	2
Mental Health*	12	Good	Fair	Guarded	Poor
		58	42	0	0

* Treatment Completers only based upon final CANS assessment scores

Relationship of Post-Intervention Statuses and Treatment Impact Strength to Outcome Criteria

A composite of all recidivism types were correlated to all End of Treatment Dynamic Variables (posttest scores) as well as dynamic factor change scores using the Chi-Square and Spearman

methods. Improvements on the Peer Closeness variable were correlated to lower aggregate recidivisms (p=.05). Deviant Sexual Interest in Children (Objective) and Sexual Preoccupation were negatively correlated to recidivism (p=-.02, p=-.01 respectively), calling into question both the sample size used in the present analysis and the assumption that sexual recidivism risks are strongly related to risk factors connected to general criminogenic (non-sexual) behavior.

Table 16. Chi-Square and Spearman Correlations of End of Treatment Dynamic Factor Status and Dynamic Change Scores to Any Recidivism

Dynamic/Treatment Variable	N	Chi-square Significance		Spearman Correlation	
		Significance (2-Tail)	Fisher's Exact Test		
Sexual Recidivism Risk	35	.27		.13	.15
Change Score: Sexual Recidivism Risk	25	.81		.12	.14
Peer Closeness	33		.31	.27	
Change Score: Peer Closeness	25	.76		.05*	
Deviant Sexual Interest: Child - Objective	21		.74	-.02*	
Change Score: Deviant Sexual Interest: Child – Objective	15		1.25	-.14	
Deviant Sexual Interest: Force – Objective	21		.18	.46	
Change Score: Deviant Sexual Interest: Force – Objective	15	.66		.12	
Deviant Sexual Interest: Child – Subjective	16		1.00	-.18	
Change Score: Deviant Sexual Interest: Child – Subjective	12	.79		.00**	
Deviant Sexual Interest: Force – Subjective	16		.24	.43	
Change Score: Deviant Sexual Interest: Force – Subjective	12		1.00	.26	
Sexual Preoccupation	34	.93		-.01**	
Change Score: Sexual Preoccupation	24	.22		-.24	
Attitude Supportive of Sexual Offending	31		.25	.29	
Change Score: Attitude Supportive of Sexual Offending	19	.50		.20	
Level of Cognitive Distortion	32	.47		.21	
Change Score: Level of Cognitive Distortion	20	.34		.18	

* significance reached (p≤.05)
** significance reached (p≤.01)

With reference to *Table* 17, non-parametric correlation of End of Treatment statuses of dynamic treatment variables and all outcomes (quality of life as well as recidivism) was performed, yielding highly significant findings of relationship in both expected and unexpected directions. Specifically, older clients tend to exhibit more of an Internalizing tendency than do younger clients, tending to under-express emotions in favor of rumination. Older clients also exhibit more Deviant Sexual Interest in Children, along with more self-reported difficulty resulting from this interest. Of developmental expectation, a finding was made that younger

residents tend to have more difficulty with Emotional Regulation. Family Reunification was found to co-vary with a reduction of Sexual Recidivism Risk, along with those who most improved on the Peer Closeness variable. Residential Stability was interestingly related negatively to larger improvements in Sexual Recidivism Risk, though it is important to recognize 'regression to the mean' in many cases wherein the improvement is partly a reflection of an extremely poor score at pretest. The same, in inverse relation, might be said for increases in Residential Stability being correlated to poorer change scores for Antisocial Orientation. Better discharge Location Quality was positively related to lower levels of Cognitive Distortion at discharge, increased Functional Empathy ratings, and was inversely related to objective measures of Deviant Sexual Interest in both Children and Force. Higher Education (or) Occupation Status was positively correlated to better Emotional Regulation. A negative relationship exists between this outcome and increased self-reported difficulty related to Deviant Sexual Interest. Of interest, individuals displaying End of Treatment reductions in Attitudes Supportive of Sexual Offending did not fare better Educationally or Occupationally, but those who showed the most improvement in this area do demonstrate higher levels of Educational or Occupational functioning ($p<.01$). Because of the inherently low incidence of reported recidivisms across this (and most) treatment population(s), inferences regarding significant relationships between specific crime categories and treatment variables are respectfully deferred until the following analysis, to occur in 2015.

Table 17. Spearman Correlations of End of Treatment Dynamic Factor Status and Dynamic Change Scores to All Outcomes
Note: only significant correlations are listed

Life Domain	Dynamic/Treatment Variable	N	Spearman Correlation
Age at Discharge	Internalizing	5	.00*
	Sexual Recidivism Risk	71	-.04
	Deviant Sexual Interest: Force – Objective	45	.00*
	Difficulty Related to Deviant Subjective Interest	5	.00*
	Emotion Regulation	22	-.05
Treatment Completion	Deviant Sexual Interest: Child – Objective	46	.05
	Deviant Sexual Interest: Force – Objective	45	.03
	Emotion Regulation	22	.02
Family Reunification	Sexual Recidivism Risk	59	-.05
	Peer Closeness	55	.03
	Change Score: Peer Closeness	42	.03
	Deviant Sexual Interest: Force – Objective	36	.04
	Attitude Supportive of Sexual Offending	52	.05
Residential Stability	Change Score: Sexual Recidivism Risk	43	-.01*
	Emotion Regulation	22	-.05
	Change Score: Attitude Supportive of Sexual Offending	37	.00*
	Level of Cognitive Distortion	51	.00*
Discharge Location Quality	Peer Closeness	55	-.01*
	Change Score: Peer Closeness	42	-.01*
	Deviant Sexual Interest: Child – Objective	37	.05
	Deviant Sexual Interest: Force – Objective	36	.05
	Change Score: Attitude Supportive of Sexual Offending	37	.03
	Level of Cognitive Distortion	51	-.04
	Change Score: Functional Empathy	19	.00*
Education or Occupation Status	Deviant Sexual Interest: Force – Objective	36	-.03
	Difficulty Related to Deviant Subjective Interest	5	.00*
	Emotion Regulation	22	.05
	Attitude Supportive of Sexual Offending	52	-.01*
	Change Score: Attitude Supportive of Sexual Offending	37	.00*
Mental Health	Change Score: Sexual Preoccupation	8	.00*
Sexual Recidivism: Misdemeanor	Change Score: Sexual Recidivism Risk	23	.00*
	Attitude Supportive of Sexual Offending	15	-.05
	Level of Cognitive Distortion	32	-.02
Non Sexual Recidivism: Felony	Sexual Preoccupation	34	-.01*
Non Sexual Recidivism: Misdemeanor	Attitude Supportive of Sexual Offending	31	-.05
	Change Score: Attitude Supportive of Sexual Offending	19	.00*
	Level of Cognitive Distortion	32	-.02*

* significance reached (p≤.01)

Relationship of Static Client Variables to Outcome Criteria

A Pearson Chi-Square analysis was utilized to identify any influence of static client variables upon recidivism (combined crime categories). Results showed near-significance for Aggression scores (p=.07). A Spearman correlation indicated unexpected bivariate effects of increases in Recidivism along with increased Median Neighborhood Income, higher Processing Speed Ability, and lower Antisocial tendencies. As mentioned earlier, the inherent infrequency of reported recidivism calls into question the generalizability of results.

Spearman and Pearson's R (where appropriate) correlations examined the relationship between client demographic variables and Length of Stay (Graduates) as an outcome. When Age at Admission, Neighborhood Income, Special Education Status, and the Number of Trauma Types Experienced were analyzed to this end, fewer Trauma Types and higher Neighborhood Incomes were correlated to Shorter Lengths of Stay (p=.03, p=-.04 respectively). Turned around, increased Length of Stay would be expected for individuals presenting with an increased number of Trauma Types based upon the additional trauma-focused work that may be indicated for these clients. Similarly, a Pearson's R analysis examined cognitive factors potentially related to Length of Stay; with Working Memory and Processing Speed falling short of significance and also being related inversely to this outcome (p=-.06, p=.06 respectively), there appears to be no unidirectional or strong relationship. Using a Pearson's R correlation analysis, it was suggested that clients who are older at time of successful discharge tend to have shorter intervals of treatment (p=-.03).

Table 18. Chi-Square and Spearman Correlations of Static Factors to Any Recidivism

Static or Demographic Variable	N	Chi-square Significance		Spearman Correlation
		Significance (2-Tail)		
Age at Admission	51	.36		-.12
Neighborhood Income	41	.34		.01**
Special Education Status	44	.96		-.15
Full Scale IQ	37	.72		-.19
Verbal Comprehension IQ	31	.43		-.22
Perceptual Organization IQ	30	.20		-.37
Working Memory Index	24	.62		-.23
Processing Speed Index	26	.59		-.05*
Antisocial Orientation	20	.17		-.02*
Potential for Substance Abuse	34	.51		-.23
Self Esteem	20	.17		.18
Aggression	17	.07		.26

* significance reached (p≤.05)
** significance reached (p≤.01)

Table 19. Spearman Correlations: Relationship between Client Demographic Variables and Length of Stay (Graduates)

Variable	N	Value
		Spearman Pearson's R
Age at Admission	76	-.38
Neighborhood Income	63	-.04*
Special Education Status	70	.26
Number of Trauma Types Experienced	10	.03*

* significance reached (p≤.05)

Table 20. Pearson's R Correlations: Relationship between Clients' Cognitive Variables and Length of Stay (Graduates)

Variable	N	Pearson's R Correlation
Verbal Comprehension IQ	55	.15
Perceptual Organization IQ	52	.06
Working Memory Index	43	-.06
Processing Speed Index	48	-.33

With reference to *Tables 21 and* 22, demographic variables, as well as Full Scale IQ and Processing Speed Index Scores were examined as predictors of Family Reunification using a binomial logistic regression analysis. Prediction success for the entire model of variables was strong (80.7%). The Wald criterion demonstrated that older Age at Admission and Special Education Status made significant contributions to the prediction of Family Reunification (p=.05, p=.20 respectively). Full Scale IQ was not a significant predictor, along with Neighborhood Income.

Tables 21 & 22. Binomial Logistic Regression: Family Reunification as is predicted by Static Variables

Table 21. Classification Table

	Predicted		
Observed	Family Not Reunified	Family Reunified	Percentage Correct
Family Not Reunified	41	1	97.62
Family Reunified	10	5	33.33
Overall Percentage			80.70

Table 22. Variables in the Equation

Predictor Variable	Wald	Significance	Exp(B)
Age at Admission	3.69	.05*	1.00
Neighborhood Income	.20	.66	1.00
Special Education Status	1.61	.20*	.38
Full Scale IQ	.07	.78	1.01
Potential for Substance Abuse	.25	.61	1.06
Constant	4.56	.03	.00

* Primary Contributors to Model Prediction

Table 23. Chi-Square: Relationship of Special Education Status to Non-Sexual Recidivism: Misdemeanor

Recidivism Category	N	Chi-square Significance (2-Tail)
Non-Sexual Recidivism: Misdemeanor	44	.85

Table 24. Pearson's R Correlation: Relationship between Length of Stay (Graduates) and Age at Discharge

Variable	N	Pearson's R Correlation
Age at Discharge	76	-.03*

* significance reached (p≤.05)

Relationship of Length of Stay to Outcome Criteria

Spearman correlation was also utilized to link differing Lengths of Stay to differences in the outcomes of Residential Stability, Discharge Location Quality, Education (or) Occupation Status, and Mental Health Status. Increased Length of Stay was associated with better Educational/Occupational outcome (p=-.03).

Table 25. Spearman Correlations: Relationship between Length of Stay (Graduates) and Quality of Life Outcomes

Variable	N	Spearman Correlation
Residential Stability	59	.19
Discharge Location Quality	59	.19
Education or Occupation Status	59	-.03*
Mental Health	10	.19

* significance reached (p≤.05)

Client Characteristics that Differentiate Completers from Non-Completers

With regard to distinguishing the client characteristics of successful treatment completers and non-completers, we begin by identifying the typical Length of Stay prior to a determination of 'Failure to Adjust' to program or clinical expectations as being 10.8 months, as compared to

completers who, on average, currently require 23.5 months of treatment. Descriptively, 73% of clients admitted to Mathom House successfully complete the treatment program, with the 23% of treatment failures representing an increase over the past several years.

Table 26. Treatment Completion and Length of Stay between January 1, 2009 and December 31, 2013

Group	N	Percentage of Entire Sample	Mean Length of Stay in months	Range in months
Treatment Completers	76	73	23.5	5.1 – 35.5
Treatment Non-Completers	28	27	10.8	2.5 – 30.6
All Clients	104	100	20.1	2.5 – 35.5

Inferentially, binomial logistic regression toward Treatment Completion was analyzed for four distinct predictor models *(refer to Tables 27 – 34)*. Model 1 involved a combination of criminogenic, cognitive, financial, and developmental predictors; Model 2 involved criminogenic, financial, and developmental variables; Model 3 involved criminogenic, educational, and cognitive variables; and Model 4 utilized only cognitive predictors. Prediction success for each model of variables was strong (all were 77 – 78%). The Wald criterion demonstrated that for Model 1, Potential for Substance Abuse and Full Scale IQ were the best predictors of Family Reunification (p=.01, p=.06 respectively). Model 2 indicated Special Education Status and, again, Potential for Substance Abuse as the strongest predictors (p=.03, p=.04 respectively). Model 3 combined these two strong predictors from Model 2, with the removal of Full Scale IQ changing predictive validity strongly toward Special Education Status (p<.01). Model 4 attempted to postulate IQ domain scores as predictors of ultimate Family Reunification; results suggested strong prediction from the Perceptual Organization Index score (p=.02). The ultimate goal of such exploratory models of outcome prediction will certainly be helped by subsequent increases in sample size, with the current regression equations, at worst, serving as a place-holder for more meaningful covariate and predictive analyses to come.

Tables 27 - 34. Binomial Logistic Regression: Treatment Completion as predicted by 4 Static Models

Table 27. Classification Table: Model 1 (Criminogenic, Cognitive, Financial, and Developmental)

Observed	Predicted		
	Family Not Reunified	Family Reunified	Percentage Correct
Non-Completion	5	11	31.25
Completion	3	42	93.33
Overall Percentage			77.05

Table 28. Variables in the Equation: Model 1 (Criminogenic, Cognitive, Financial, and Developmental)

Predictor Variable	Wald	Significance	Exp(B)
Age at Admission	.03	.87	1.00
Neighborhood Income	.00	.97	1.00
Full Scale IQ	3.60	.06*	1.05
Potential for Substance Abuse	6.01	.01*	.75
Constant	.27	.60	.13

* Primary Contributors to Model Prediction

Table 29. Classification Table: Model 2 (Criminogenic, Educational, Cognitive)

Observed	Predicted		
	Family Not Reunified	Family Reunified	Percentage Correct
Non-Completion	5	10	33.33
Completion	3	42	93.33
Overall Percentage			78.33

Table 30. Variables in the Equation: Model 2 (Criminogenic, Educational, Cognitive)

Predictor Variable	Wald	Significance	Exp(B)
Special Education Status	4.59	.03*	.23
Full Scale IQ	1.67	.20*	1.04
Potential for Substance Abuse	4.11	.04*	.78
Constant	.07	.79	.51

* Primary Contributors to Model Prediction

Table 31. Classification Table: Model 3 (Criminogenic, Educational)

Observed	Predicted		
	Family Not Reunified	Family Reunified	Percentage Correct
Non-Completion	5	13	27.78
Completion	2	51	96.23
Overall Percentage			78.87

Table 32. Variables in the Equation: Model 3 (Criminogenic, Educational)

Predictor Variable	Wald	Significance	Exp(B)
Special Education Status	8.63	.00*	.17
Potential for Substance Abuse	2.72	.10	.84
Constant	17.01	.00	11.85

* Primary Contributors to Model Prediction

Table 33. Classification Table: Model 4 (Cognitive Only)

Observed	Predicted		
	Family Not Reunified	Family Reunified	Percentage Correct
Non-Completion	3	9	25.00
Completion	3	39	92.86
Overall Percentage			77.78

Table 34. Variables in the Equation: Model 4 (Cognitive Only)

Predictor Variable	Wald	Significance	Exp(B)
Verbal Comprehension IQ	.01	.90	1.00
Perceptual Organization IQ	5.41	.02*	1.09
Working Memory Index	2.73	.10*	.95
Processing Speed Index	1.16	.28	1.03
Constant	1.62	.20	.01

* Primary Contributors to Model Prediction

A final analysis of association utilized the Chi-Square test comparing all valid ($n \geq 4$) demographic, static, and Beginning of Treatment (pretest) variables to Treatment Completion status. Highly significant correlation between holding a Special Education status and Non-Treatment Completion was determined ($p < .01$). Better Peer Group Quality status was related to vastly better Treatment Completion rates ($p = .01$), and clients who initially reported no Deviant Sexual Interest fared better with regard to this outcome criterion ($p = .03$).

Table 35. Chi-square: Association between All Demographic, Static, Beginning of Treatment Variables and Treatment Completion Status

Variable	N	Chi-square Significance (2-Tail)	Fisher's Exact Test (2 – Tailed)
Age at Admission	104	.48	
Neighborhood Income	86	.33	
Special Education Status	93	.00**	
Number of Trauma Types Experienced	14	.17	
Full Scale IQ	79	.61	
Verbal Comprehension IQ	72	.85	
Perceptual Organization IQ	69	.42	
Working Memory Index	55	.78	
Processing Speed Index	60	.73	
Antisocial Orientation	45	.62	
Potential for Substance Abuse	79	.12	
Self Esteem	46	.78	
Aggression	42	.38	
Functional Community Behavior	11		.58
Beginning of Treatment:			
Peer Group Quality	26	.01**	
Functional Behavior	13		.82
Family Functioning	4		1.08
Recidivism Risk	70	.54	
Peer Closeness	68	.22	
Deviant Sexual Interest: Child - Objective	58	.87	
Deviant Sexual Interest: Force - Objective	56	.66	
Deviant Sexual Interest: Child - Subjective	47	.03*	
Deviant Sexual Interest: Force - Subjective	47	.45	
Difficulty Related to Deviant Sexual Interest	9		.06
Sexual Preoccupation	69	.50	
Emotion Regulation	13	.39	
Attitude Supportive of Sexual Offending	61	.65	
Level of Cognitive Distortion	64	.52	
Functional Empathy	26	.22	

* *significance reached (p≤.05)*
** *significance reached (p≤.01)*

A Systematic Evaluation Logic Model for Measuring the Value of Residential Intervention: Challenges and Rewards

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PCCYFS 2015 Annual Spring Conference

Glossary – Clinical Accountability

- Clinical Accountability must be defined within the context of a program's mission, values, and objectives, as "...there is no commonly held view regarding clinical accountability within the mental health sector"

- Clinical Accountability should not be viewed without consideration of other factors such as managerial, economic and political accountability

– http://www.hdc.org.nz/media/200679/clinical%20acco
untability%20within%20the%20mental%20health%20s
ector%20march%2098.pdf

Glossary – Research 101

- Dependent Variable
  - Depends upon Changes in the Independent Variable

- Independent Variable
  - Affects the Dependent Variable

- Descriptive Statistics
  - Quantitative Descriptions of Data Features
    - Central Tendency Measures
    - Dispersion Statistics

- Inferential Statistics
  - Infers Properties about a Given Population
    - Tests of Relationship
    - Tests of Difference

Glossary – Institutional Approach

- Evaluation Logic Model

- 'Outputs'

- 'Outcomes'

- 'Impacts'

- Psychometrics

- 'Quality Improvement'

Agenda

- Determining the Relevance, Value, Content, and Process of a Clinical Evaluation Logic Model

- Moving from Outputs to Outcomes

- Moving from Outcomes to Treatment Impact

Agenda, continued

- Beyond Content to Process: Improving Residential Treatment using Generated Data

- Clinical accountability: 'Half' of Quality Monitoring

- Making it Happen with Limited Time and Resources: Challenges and Solutions

A Brief History of Metrics and Behavioral Metrics

The 'Science' of operational and service effectiveness measurement was first recorded with Ignaz Semmelweis in the year 1847, when he identified an association between puerperal fever and physicians who failed to wash their hands prior to delivering babies.

1847 – We've had some Time to Consider Clinical Accountability.

-1913

- Ignaz Semmelweis

- Florence Nightingale – Multiple factors related to death (outcome of interest) related to the Crimean War
  - Both utilized the continual gathering of detailed statistics

- Ernest Amory Codman – complained that hospitals were reporting the number of patients treated, but not how many benefited from treatment. Note: Institutional disclosure of hospital data is not yet universally adopted.

  - Codman, Earnest Amory; Mayo WJ; Clark JG; Chipman WW (1913). "Standardization of Hospitals: Report of the Committee Appointed by the Clinical Congress of Surgeons in North America". *Trans Clin Congress Surg N Am.* 3-8 **4.**

-1948

- Professional Organizations and Hospitals adopted a standard medical record

  - In the United Kingdom, this included Primary Care

  - Also in the UK, a Centralization of Medical Services resulted in the National Health Service, facilitating Reliable and Valid Assessment Practices

  - A Moderately Reliable Data Base for Research had Begun

-1998

- 1966 - Avedis Donabedian – "Evaluating the Quality of Medical Care" first used the term 'Outcome' as part of a quality assessment framework

- 1971 - Archie Cochrane Clarified the Key Concepts in Outcomes Research and 'Evidence-Based' Medicine

- 1988 – Paul Ellwood coined the term "Outcomes Management" referring to patient care as being driven by detailed analysis of how similar cases fared after receiving alternative/newer treatments

- 1998 – John Eisenberg wrote of the importance of considering patient and stakeholder experience, expectation, and values along with previous outcome variables of interest

Current Clinical Accountability in Medicine

- 2011 – "Watson," an Artificial Intelligence System, has been used to Aid in Supporting the Diagnostic and Treatment Decisions of Physicians, based upon Treatment Guidelines, EMR Data, Doctor/Nurse Notation, Research Material, Clinical Studies, Journal Articles, and Patient Information. This Ongoing Procedural Outcome System is an attempt to Centralize Medical Decisions.

- "Clinical Trials" have been indicated for the 'Softer Sciences' of Mental Health and Public Health

Clinical Accountability in Behavioral Health

- 'Old' system: "We Know what we're Doing."
  - *"How Long will Treatment Take?"*
  - "Are they *Ready* to Leave Yet?"
  - "Did they Complete Treatment *Successfully?"*
  - "Were they *Engaged* in Treatment?"

- 'New' System: "How well are we Doing?"
  - "Does your program use *Evidence-Supported Practices?"*
  - "Does your program utilize *Standardized Treatment Protocols?"*
  - "Does your program measure/report *Outcomes?"*

For the COO: $$$$$

- Increasing trend of MCOs rewarding effective treatment providers
  - 'Pay for Performance' approaches
  - Interest in efficient and effective therapies

- Increasing trend of Courts/Probation referrals to "Programs that Work"
  - Use of standardized Criminogenic Need Assessment
  - Interest in Community Safety/Client Rehabilitation

"We've Only Just Begun…"

- There are articles speaking to outcome measures in specific facilities but little to no information on statistics of RTFs utilizing outcome measures.

- "Although research has evaluated the outcomes of specific residential treatment programs (Hair, 2005; Zimmerman, Nasel, & Raines, 1998), it is unclear to what extent residential treatment facilities routinely collect outcomes data from children and youth or their families after discharge

  –(Brown, Barrett, Ireyes, Allen, & Blau, 2011).

"... Clinical Accountability."
- Not the Carpenters, 1971

- "...Further, it is unknown whether there are certain features of residential treatment facilities that are associated with their adoption of outcomes monitoring practices." (Brown, Barrett, Ireyes, Allen, & Blau, 2011).

- These researchers suggest that "Programs accredited by programs such as COA and CARF are more likely to have outcome measures in place."

Some Local Trendsetters

- SAMHSA

- Managed Care Organizations

- Dauphin County Probation Department

Residential Treatment is not an 'Evidence Supported' Construct

- Across a sample of 741 residential treatment facilities for children and teens, determined that 69% of facilities measured satisfaction with residential treatment after discharge, and approximately half of the agencies measured the post-discharge utilization of mental health services, housing status, educational attainment, and clinical/functional status (forensically-referred clients may pose ethical limitations upon methods of post-treatment data collection).

- Overall, 67% of studied agencies collect post-discharge outcome data of any form.

- The authors state, "Finally, little is known about the strategies or tools that residential treatment providers use to collect outcomes data and how those data are used. Research into these issues and continued dialogue among residential treatment providers and other stakeholders in systems of care is necessary to make progress toward developing a service system that is data driven and responsive to the needs of youth and their families."

  - Brown, Barrett, Ireys, Allen, and Blau (2011)

"RTF Not Otherwise Specified" (NOS)

- RTF treatment remains a poorly defined construct that is compromised by divergent treatment approaches, intensities, durations, and delivering widely varying outcomes.

- This reality has limited efforts to analyze RTF effectiveness, due to the difficulty of determining comparable programs.

- Specialization of RTFs has further fragmented the sample, with the existence of facilities designed to address general delinquency issues, sexually problematic behavior, significant psychiatric symptoms, etc.

RTF NOS

- Additionally, admission, maintenance, and discharge criteria vary widely across RTFs. According to Zimmerman (1990), "One deficit is the lack of literature assessing specific programmatic elements. While adolescent residential and inpatient programs typically consist of standard program elements such as individual, group, family, and milieu treatments, few studies specifically evaluate these or other programmatic elements."

- Butler and McPherson (2007) found, "Another deficit in this body of literature is the lack of consensus on the definition of residential treatment. Various types of residential programs currently fall under the same defining label. This impedes researchers' abilities to conduct systematic evaluations on the efficacy of this approach."

RTF NOS

- Bettmann and Jasperson (2009) assert, "Many studies fail to describe residential treatment programs in sufficient detail, making it difficult to replicate treatment approaches... In many cases, program approaches are simply labeled as a 'therapeutic community', 'cognitive behavioral', etc... The lack of more precise descriptions makes it difficult to make causal attributions to the large number of confounds that could be present."

- Helgerson et al. (2005), in a best-case scenario study wherein RTFs were compared within a standardized state-run system of care, still postulated, "The present study provides a clear caution to not view residential treatment as a monolithic approach to serving children. Having demonstrated that significant provider differences do exist, this study sets the stage for future research that can identify specific predictors of these differences in outcomes."

Dr. Lyons on RTF Accountability

- Little empirical research has been conducted to objectify residential treatment, and research that has been conducted has pointed out stark contrasts between providers in terms of treatment type, intensity, and duration.

- According to Lyons, Terry, Martinovich, Peterson, and Bouska (2001), "Little is known about the anticipated outcomes of this [expensive] service."

Some Preliminary Indications

- Lyons et al. (2001) offered initial support for the generalized effectiveness of RTF treatment for adolescents, while pointing out stark contrasts in treatment outcomes based upon facility.

- "Improvement within a residential treatment program may be unrelated to outcomes in the community. There is no evidence of a relationship between outcomes in residential treatment and functioning in less restrictive environments."

  - This finding yet again stresses the need for RTF-generated outcome data in the broader scheme of making a case for legitimacy.

And, of Relevance:

RTFs appear to yield **favorable results** when they adhere to evidence-based models and a standardized approach that is weary of being programmatic, but rather focuses upon individual client profiles that subscribe to risk, need, and responsivity factors (Lyons et al., 2001).

Our Research Endeavor

- In answering Dr. Lyon's Challenge, ECI created the:

  - MORE

  - EMORE

Determining the Relevance, Value, Content, and Process of a Clinical Evaluation Logic Model

- Defining Clinical Mission

- Defining Clinical Resources

- Identifying Relevant "Variables of Interest"
  - Identify Treatment Targets/Objectives
  - Review Pertinent Meta-Analyses

- Operationalizing Data Collection Process

- Operationalizing Data Interpretation Process

Sample Clinical Evaluation Logic Model

ECI Clinical Logic Model

Moving from Outputs to Outcomes

- ## Outputs answer the questions:

  - "What Do We Do?"

  - "Who Do We Serve?"

  - "How Do Clients Engage our Services?"

- ## Outcomes answer the questions:

  - "What Learning has Taken Place?"

  - "What Behavior has Taken Place?"

  - "What Condition is the Client and/or Community in Going Forward/Long-Term?"

Outcomes: Basic Foundation

- Well-Constructed Constructs

- Avoidance (or Acknowledgement) of Sampling Errors

- Avoidance of 'Confirmation Bias'

Outcomes: Basic Foundation

- A Descriptive Statistics Plan

- An Inferential Statistics Plan

- A Pre-Ordained Report Format
  - Reflects the Valued Information Originally Sought
  - Does Not Reflect the Information that Became Available
  - Does Not Reflect only the Information that the Marketing Department would Like to Use

Moving from Outcomes to Treatment Impact

- Why Measure "Treatment Impact?
  - Process Evaluation
  - Stakeholder Interest
  - Public Health Interest and Contribution
    - Reduction of Victimization
    - Reduction of Perpetration
    - Helping Help-Ready Families
    - Increase in Client Functionality
    - Reduction in Client Psychopathology

Example: Clinical Research Purpose

- To conscientiously monitor and improve our clinical service delivery to individuals, families, and the broader community.

- To continually improve Edison Court's annual treatment impact and treatment outcome data collection and analysis processes.

- To increase longitudinal continuity of data collection and analysis processes as a benefit to Edison Court's institutional clinical research initiatives.

- To provide idiographic and nomothetic clinical data for use by our clinical providers and external stakeholders, respectively, who come to recognize the value of our work and improvement processes.

– ECI, 2013

Example: Clinical Research Mission

- Provision of care that is data-driven and based upon best practices.

- To establish a continual Institution of research, publication, and teaching within our existing agency structure.

- To ultimately contribute to the fund of knowledge supporting our generalist and specialized work with clients and the broader community.

— ECI, 2013

Example: Rationale for Variable Selection

- Empirical Imperative: Variables of Interest subsume the primary empirically held and clinically regarded factors related to general mental health and community recidivism

- Stakeholder/Community Imperative: State and Oversight Agencies request specific data from Residential Treatment Facilities for monitoring and regulatory purposes, compelling these Variables to be included

- Agency Interest: Specific Variables that have been found to be Beneficial to Treatment within ECI's Residential Programs, or have been found to be Relevant for Case Conceptualization and Risk Assessment are included

— ECI, 2013

A Few Pointers on Assessment Tools, Scoring, and Statistical Applications for the 'Lay Researcher'

- Learn How to Use Excel
  - The Organization of Your Data Spreadsheet can Vastly Improve Data Tracking, Entry, and Interface
    - SPSS Compatible

- Assessments that Assume 'Normal Distribution' make Analysis More Convenient

- Keep your Research Methods Textbook Near, *or*, get the 'Stats Guru' for SPSS (or similar) App.

- Numeric Data is Generally Better than Nominal Data
  - Ordinal Alternatives to Nominal
    - Use of Dichotomous Scoring

A Few More Pointers

- You don't have to be a Psychologist to Administer Most Assessments

- Many Relevant Variables of Interest (e.g. Demographic, Static) can be Gleaned from Electronic Health Records and/or Client Files

- PSPP is Free

- Don't be Afraid to Develop Your Own Face-Valid Assessments
  - Occasionally, a Clinical Variable of Interest does not have a Corresponding Test
  - Unique Forms of Behavioral Measurement Exist within an RTF setting

- Statistical Consultants are Available Online
  - A Reasonable Hourly Rate may be $80.
  - Many, if not Most Statistical Questions can be Answered in 1 Hour.

Example: Schematic of Variable Relationship

ANALYSIS OVERVIEW

| Predictor or Correlate Variable Group |
| Criterion or Correlate Variable Group |

TREATMENT "FIT": How do Client Profiles Predict or Relate to Levels of Functioning and Status at Discharge?

| Demographic Data | Stable Data | Beginning of Treatment Data | End of Treatment Data | Discharge Outcomes | Recidivism Outcomes |

TREATMENT IMPACT: How are Clients Impacted by Treatment?

| Demographic Data | Stable Data | Beginning of Treatment Data | End of Treatment Data | Discharge Outcomes | Recidivism Outcomes |

OUTCOMES: How do Client Profiles, Treatment Impact, and Functioning at Discharge Predict or Relate to Status at Discharge and Recidivism?

| Demographic Data | Stable Data | Beginning of Treatment Data | End of Treatment Data | Discharge Outcomes | Recidivism Outcomes |

CORRELATIONAL: What Relationships Exist Among Clients' Demographic, Cognitive, Characterological, Functioning at Admission, Functioning at Discharge, Quality of Life at Discharge, and Subsequent Recidivism Data?

| Demographic Data | Stable Data | Beginning of Treatment Data | End of Treatment Data | Discharge Outcomes | Recidivism Outcomes |

Example: Research Abstract

A group of male adolescent clients who had been discharged from Mathom House, a residential facility specializing in the treatment of sexually problematic behavior, contributed to a wide-reaching analysis of treatment impact and post-treatment outcomes. Mathom House employs primarily Cognitive Behavioral and Dialectical Behavioral therapeutic modalities in conjunction with a positive reinforcement derivation of a token economy within the residential milieu. All clients are supported in the completion of a standardized (or adapted, as indicated), sequential array of therapeutic objectives prior to ultimate assessment for discharge. 101 variables of interest derived based upon conventional clinical relevance to this population were investigated using a combination of standardized psychological assessment, actuarial (legal, clinical) data clinician ratings, residential staff ratings, client ratings, public databases, objective computerized assessments, and site-specific study measures.

- ECI, 2014

Example: Research Abstract (continued)

...Quality of life outcomes as well as recidivism findings were related to static and dynamic client variables. A repeated measures component served to relate changes in dynamic functioning from clients' treatment commencement to completion. Successful (n=76) and unsuccessful (n=28) program graduates were differentiated with regard to predictors and outcomes. Results indicate positive treatment impact overall, including a significant reduction of sexual recidivism risk for program completers. Quality of life outcomes generally correlated to clinical factors in the expected direction and sexual-specific and general recidivism rates fell below statistical expectation. Implications for fit and possible modification of the current treatment approach for specific client subgroups, as well as novel variable relationships are discussed.

-ECI, 2014

Example: Demographic Descriptive Data Results

Population Characteristics:

- As we have determined, a population of adolescent males (age range 12.4 to 19.5 years; $x=16.0$) who have exhibited sexually problematic behavior within the community for which they had been adjudicated either delinquent or dependent, appear to reflect normative distribution with regard to findings of socio-economic status, and overall cognitive functioning, based upon regional statistics. Three significant findings for our treatment sample that deviate from general population trends include:

- Mathom House clients are 3½ times as likely to require special education services reflecting multiple etiologies that impact their learning, occurring at a 46% rate compared to 13% occurrence within the population of Pennsylvania school-aged individuals.

— EGI, 2014

Example: Demographic Descriptive Data Result

- Our clients, on average, have experienced five distinct types of significant trauma as children, a level of severity only experienced by approximately 10% of the general population based upon the landmark Adverse Childhood Experiences (ACE) Study (1998).

– ECi, 2014

Measuring Accurately on a Continuum

- Treatment is about making changes which should be assessed reliably and systematically to ensure that the observed changes are meaningful... While there is a choice of many assessment tools that can be used to predict... risk and reoffending, research to develop tools to assess risk changes lacks behind."

  - Stephen C. P. Wong, Mark E. Olver, Terry P. Nicholaichuk; [Sexual Offender Treatment, Volume 8 (2013), Issue 1]).

- 'Harm Reduction' Concept

Example: Demographic Data Results
(Inferential)

The sample demonstrates a statistically significant deficit in their ability to process information quickly and/or efficiently as was determined by conventional measures of *Processing Speed* compared with the general population; this area of intellectual functioning also represents a significant area of deficit relative to their other areas of processing ability. Though significant outcome correlates to this deficit have not yet been identified, etiological considerations including the influence of ADHD symptoms and emotional dysregulation are hypothesized...

-- ECI, 2014

Example: Static Factor Data Results (Inferential)

- With regard to predicting successful program completers from non-completers, four logistical regression models were grouped by construct in an attempt to examine each static variable. Additionally, a Chi-square analysis of group association (completers, non-completers) attempted to add additional predictive validity to this end. Of most relevance were findings of higher social adaptability as measured at time of program admission by the *peer group quality* variable as predicting a successful completion of our treatment program as it currently exists. At this early point, regression/prediction models that include this variable in addition to *potential for substance abuse* (and its precursor, *low frustration tolerance*) appear to be somewhat promising predictors of this outcome.

  – ECI, 2014

Example: Treatment Impact Results (Inferential)

- Highly significant statistical (p<.01) and clinical gains occurring between pretest and posttest measures of dynamic/functional factors were determined in the areas of *sexual recidivism risk, peer closeness, sexual preoccupation, attitudes supportive of sexual offending, use of cognitive distortions, and deviant sexual interest in children* (objective measurement).

- Moderate significance (.01<p≤.05) was also determined in the treatment areas of *peer group quality and functional empathy*. Considering the primacy of these areas of therapeutic focus in the inherent treatment goals of our program and the relevance of these particular variables to recidivism risk, these results are taken as validating the current clinical approaches being taken, as well as validating the preexisting assumption that our specialized treatment for sexually problematic youth is effective.

Example: Descriptive Client Outcome Graph

(It wouldn't be a PowerPoint Presentation without some Graphs)

Table . Test Statistics

Variable (Pretest to Posttest)	Z	Significance (2-Tailed)
Peer Group Quality	-2.31	.02*
Family Involvement	N/A	N/A
Family Functioning	-.45	.65
Sexual Recidivism Risk	-5.64	≤.01**
Peer Closeness	-3.54	≤.01**
Deviant Sexual Interest: Child – Objective	-3.32	≤.01**
Deviant Sexual Interest: Force – Objective	-1.89	.06
Deviant Sexual Interest: Child – Subjective	.00	1.00
Deviant Sexual Interest: Force – Subjective	-2.24	.03*
Difficulty Related to Deviant Sexual Interest	N/A	N/A
Sexual Preoccupation	-3.90	≤.01**
Response Inhibition	-1.00	.32
Emotional Regulation	-.53	.59
Attitude Supportive of Sexual Offending	-4.56	≤.01*
Level of Cognitive Distortion	-3.65	≤.01**
Functional Empathy	-2.00	.05*

*Significance reached (p≤.05)
**Significance reached (p≤.01)

Example: Client Outcome Results (Descriptive)

- A successful graduation rate of 73% was determined based upon admission and discharge statistics spanning the past five years. Thus, a standard 'Failure to Adjust' rate near 10% over the course of Mathom House's 28-year history has notably increased of late. It is suggested that this result be attributed to increasingly poorer behavioral regulation and lower levels of functioning among clients who are being referred to our level of care. In response to our changing population, increased emphasis has been placed on training all staff in the methods of de-escalation as part of a broader movement toward enacting a 'Sanctuary Model' with fidelity.

- In 80% (n=16) of non-treatment completion cases, transfer to another residential treatment facility occurred. The remaining, (n=4) were transferred to secure, non-treatment facilities.

  – ECI, 2014

Example: Descriptive Client Outcome Graph

Table 15. Quality of Life Outcomes: Status Ratings at Time of Discharge (Completers and Non-Completers)

Life Domain	N	Percent of Sample by Status (rounded to whole numbers)			
Family Reunification	88	Family Reunified		Family Not Reunified (may reflect independence)	
		26		74	
Residential Stability	87	Rent/Own Residence	Temporary, Stable	Temporary, Non-stable	Homeless or Missing
		2	97	0	1
Discharge Location Quality	87	Community, Independent	College Dorm	Group Home	Residential Facility
		24	3	49	23
Education or Occupation Status	87	In College (or) Diploma (or) held Job for ≥1 year	In High School (or) held Job for ≤1 year	Plan for Training or Occupation	Dropout and no Job Plan
		5	67	26	2
Mental Health*	12	Good	Fair	Guarded	Poor
		58	42	0	0

*Treatment Completers only, based upon final CANS assessment scores

Example: Client Outcome Results (Inferential)

- Individuals displaying end of treatment reductions in *attitudes supportive of sexual offending* did not fare better educationally or occupationally, but those who showed the most improvement in this area do demonstrate higher levels of *educational or occupational functioning*. Please see *Table 15* for a full description of qualitative outcomes.

- Non-treatment (preexisting) factors that related to increased *length of stay* were determined to include higher *numbers of trauma types experienced* as well as higher *neighborhood income*. Without a contextual basis to interpret the latter variable, it is suggested that those clients presenting with increased traumatic experience require additional therapeutic interventions that arguably play both treatment `pre-requisite' and `progress maintenance' roles.

– ECI, 2014

Beyond Content to Process: Improving Residential Treatment using Generated Data

- Reciprocal interaction of clinical accountability and treatment effectiveness

- Of Course, there's the 'GIGO' Effect

Applying Agency Research Findings

- Self-Recommendations should reflect information that meets basic reliability & validity requirements:

  - *Size of r/Generalizability of Findings*

  - *Strength of Variable Relationship(s)*

  - *Acceptability of Construct in Question*

  - *Relevance of Finding(s) to Agency Mission*

Examples: "Treatment Implications"

- Beginning at the initial contact (interview) with prospective clients, attention paid to a longstanding history of peer disconnection and/or particularly criminogenic peer associations is legitimized based upon the poor treatment success rate for these individuals. Conceptualization of this client feature would best involve a differentiation between situational/reactive versus characterological/personality contributors. Client responses to early intervention with social skill-building modules will have diagnostic value related to their treatment fit prognosis.

- Non-improvement following detection and intervention can be seen in the context of milieu and treatment behaviors to more quickly determine whether treatment options at Mathom House continue to be appropriate. Stage of change measurement utilizing the URICA has already commenced, to aid in this assessment as well as to add additional data to subsequent annual analyses.

Examples: "Treatment Implications"

- For individuals with significant antisocial personality features, early determination to ascertain the level of sociopathic crystallization (particularly in the case of older program candidates) will enable staff to design treatment plans that focus on adaptive interpersonal rehearsal and are based less upon an assumption of repressed empathy. For those who present with antisocial behaviors but may or may not possess a sociopathic agenda, assessment that includes clinical interviewing in combination with a multi-construct measure such as the Personality Assessment Inventory (PAI, PAI-A) or the Hare Psychopathy Checklist – Revised PCL:SV may be helpful in clarifying etiology and thus treatment approach and outcome prognosis.

Examples: "Treatment Implications"

- Highly significant improvements in the area of sexual recidivism risk support our current standardized treatment curriculum for sexually problematic behavior, such that the finer measures underlying this construct (such as the 14 dynamic ratings of the ERASOR) may better inform any potential changes of treatment emphasis on a programmatic level. Using these treatment targets as a supplement to treatment plan creation has, to some extent, already been put into practice, though this aspect can be made increasingly programmatic. Recent research suggests that the ERASOR ratings do moderately correlate to actual recidivism, strengthening the justification for using these dynamic items in treatment planning.

Clinical Accountability: 'Half' of the Quality Monitoring Agenda

In 2013, ECI decided to implement an organization-wide Performance and Quality Improvement (PQI) program, in an effort to advance efficient, effective service delivery and achieve strategic and program goals.

Quality Initiatives and Clinical Accountability

QI and CA programs both:

- Assess Targeted Areas of Performance

- Make Plans to Improve Effectiveness

- Regularly Reassess Results with a Focus on Aiming to Achieve the Best Possible Outcome

Quality Initiatives and Clinical Accountability

Quality Initiatives may Differ from Clinical Accountability Models:

- QI provides an **agency-wide** measure of operational and service outcomes, with varying but infrequent involvement of specialized assessment tools

- QI often involves a **stratified team of agency employees** to report measurements reflecting their unique roles within the broader organization

- QI endeavors to account for **system and client outcomes**

Quality Initiatives and Clinical Accountability

- QI and CA data may overlap

- Depending upon it's Scope and Size, the CA initiative may also be absorbed into the broader QI Program

- CA, or the CA component of QI ostensibly should offer a level of information that reflects a 'deep dive' into:

  - Demographic Data
  - Static Psychological Data
  - Dynamic/Treatment Variables and Change (e.g. pre-post)
  - General Outcome Data
  - Unique Program-Relevant Outcome Data

Making it Happen with Limited Time and Resources: Challenges and Solutions

- **Lack of human and scientific capital**: Methods for conducting outcomes research need to be developed, and there are limited trained 'researchers' who can conduct outcomes research within treatment programs.

- **Fragmentation of outcomes research**: Databases and patient registries are fragmented and limited in the number of patients, and many are of unknown data quality. Studies with a small number of patients in health systems limits the use of proper statistical methods and inferences from particular studies. Limited information is available about certain priority populations and sub groups.

- **Coordination across outcomes research framework**: A number of groups conduct outcomes research within the United States and across the federal government but much of this research effort is not coordinated.

Challenges, continued

- **Improper reporting of outcomes:** Many hospitals/healthcare providers do not properly report outcomes creating bias in studies.

- **Lack of interpretability of measures/incorporation into clinical practice**
  - Clinicians must be educated about the usefulness of outcome measures
  - Outcome measures must be easy to include into daily practice.

- **Unproven cost-effectiveness:** Ironically, no one has measured whether spending money on outcome studies improves medical care, compared to funding research directly on the underlying conditions.

Possible Solutions

Start by Pondering

HOW CLINICAL ACCOUNTABILITY CAN

be accomplished

Not

REASONS WHY IT CAN'T

Possible Solutions

- **Use of Graduate Student Externs and/or Interns**
  - They will thank you for the Assessment and Research Opportunity
  - They May Double as Research Consultants
- **Be, or Appoint a Data Collection Manager**
- **Drag a Long Tail**
  - Depending upon client numbers and turnaround time, consider measuring YEARS post-discharge
  - Account for Specific Relapse/Recidivism Timelines

Possible Solutions

- Do it Yourself

  ▪ Unless you are Partnered with an IDENTICAL Treatment Facility, Generalizability of your Clinical Data will be Limited

  ▪ Right Now, You Probably Won't Find a Partner (Unless you are OK with limiting yourself to 'OUTPUT'-level Accountability)

Be Honest: The Truth Might Set You Free

- Non-Reporting Results by Omission is UNETHICAL

- Not Including ALL RELEVANT FINDINGS in the Treatment Impact and Client Outcomes Report leaves an Agency with Incomplete Information

  - Attempt to Speak to the Results, or Lack Thereof, for the PRE-ORDAINED TREATMENT OBJECTIVES

  - Avoid Distraction from 'Novel Findings' if they do not ENHANCE the AGENCY's MISSION

- Stakeholders Appreciate Candor, When Trust and Accountability is a Primary Basis for Referrals

The Game is Changing

- The 'Old' system: "We Know what we're Doing."
  - "*How Long* will Treatment Take?"
  - "Are they *Ready* to Leave Yet?"
  - "Did they Complete Treatment *Successfully?*"
  - "Were they *Engaged* in Treatment?"

- **"WHY ARE WE GOING OUT OF BUSINESS?"**

- The 'New' System: "How well are we Doing?"
  - "Does your program use *Evidence-Supported Practices?*"
  - "Does your program utilize *Standardized Treatment Protocols?*"
  - "Does your program measure/report Outcomes?"

- **"WOULD YOU LIKE A COPY OF OUR AGENCY'S PEER-REVIEWED, PUBLISHED CLINICAL IMPACT RESEARCH?"**

Accountability to our Clients

Accountability to our Stakeholders

Responsibility to Improve Public Health

Thank You

- For Attending, and possibly for:

- Your Interest in Clinical Accountability

- Your Role in Public Health

- Your Current or Imminent Application of
  Clinical Accountability Models

- Connecting Evidence to Practice