USING THE COMPASS-EZ AND DUAL DIAGNOSIS CAPABILITY IN ADDICTION TREATMENT (DDCAT) INDEX TO IMPROVE OUTCOMES: RECOVERING, RENEWING, AND RESTORING LIVES

Cenean Walls Raphemot

An assignment submitted to the faculty at the University of North Carolina at Chapel Hill in partial fulfillment of the requirements for the degree of Doctorate in Nursing Practice in the Department of Nursing in the School of Nursing

Chapel Hill
2017

Approved by:

Cheryl Giscombe

Grace Hubbard

Sonda Oppewal

ABSTRACT

Cenean Walls Raphemot: Using the COMPASS-EZ and the Dual Diagnosis Capability of Addiction Treatment (DDCAT) Index to Improve Outcomes: Recovering, Renewing, and Restoring Lives
(Under the direction of Cheryl Woods Giscombe)

Background: More than two decades of research mounts clear demonstration that providing an integrated, concurrent delivery of mental health and substance abuse treatment to persons with co-occurring substance use and psychiatric illness (also known as 'dual diagnosis' [DD]) renders best outcomes; yet, most persons suffering from these disorders do not receive such integrated interventions and most community-based behavioral health agencies are not prepared to provide it. **Aims:** To investigate the dual use of COMPASS-EZ and DDCAT instruments to (1) evaluate the current dual diagnosis capability of a community-based behavioral health agency; and (2) to develop and implement evidence-based recommendations to increase the agency's dual diagnosis capabilities. **Methods:** A quality improvement (QI) initiative utilizing dual instruments to assess 22 programmatic domains of care and address the co-occurring capabilities of a single addiction treatment center for pregnant and postpartum women. **Results:** With all conditions met, focused quality improvements developed in policy for clinical documentation (recordkeeping), discharge planning, and staff competency assessment yield a prospective increase in DD-capability scores for the following COMPASS-EZ domains and agency overall: Program Policies [4.33 to 5.00], Screening and Identification [4.00 to 4.33], Integrated Discharge/Transition Planning [4.00 to 5.00], Program Collaboration and Partnership [4.20 to 5.00], and General Staff Competencies and Training [3.50 to 4.67]; total agency DD-capability score returned a prospective increase of 4.50 to 4.77. **Conclusions:** Findings suggest that across domains of care, community behavioral health agencies can continue to increase critical capabilities for patients with dual

diagnosis through policy development. The collective application of one or more independent instruments proves useful to guide and measure the efficacy of quality improvement efforts.

To the incredible “Village” [Dr. Cheryl Giscombe; Dr. Sonda Oppewal; Dr. Grace Hubbard; Mary Beth Heaney-Gárate, LCSW; and Dr. Rene Raphemot] every human being should have.
Thank you for all of your support along the way.
I am forever grateful.

TABLE OF CONTENTS

LIST OF TABLES

Table

LIST OF FIGURES

LIST OF ABBREVIATIONS

SAMSHA	Substance Abuse and Mental Health Services Administration
SA	Substance Abuse
MH	Mental Health
DSM-IV-TR	Diagnostic and Statistical Manual of Mental Disorders IV-TR
DDCAT	The Dual Diagnosis Capability of Addiction Treatment Index
CBHA	Community-Based Behavioral Health Agency
TC	Modified Therapeutic Community
TAU	Treatment-As-Usual
TTM	Transtheoretical Model of Behavior Change
DNP	Doctor of Nursing Practice
CDC	Centers for Disease Control and Prevention
QI	Quality Improvement
PE	Program Evaluation
HRSA	Health Resources and Services Administration
IHI	Institute for Healthcare Improvement
WHO	World Health Organization
IRB	Institutional Review Board
DHHS	U.S. Department of Health and Human Services
AOS	Alcoholism Addiction Only Services
DDC	Dual Diagnosis Capable
DDE	Dual Diagnosis Enhanced

CHAPTER 1:

RECOVERING, RENEWING, AND RESTORING LIVES

Introduction

In 2002, the Substance Abuse and Mental Health Services Administration's (SAMHSA) Report to Congress on the Prevention and Treatment of Co-Occurring Substance Abuse Disorders and Mental Disorders firmly recommended that behavioral health programs increase their capability to serve clients with dual diagnosis, stating that the integrated treatment of such individuals "should be the expectation, not the exception in substance abuse and mental health treatment systems" (SAMHSA, 2002, p. iv). Dual diagnosis is defined as the co-occurring presence of at least one mental disorder as well as an alcohol or drug use disorder (SAMHSA, 2011a), and in integrated treatment, both mental health (MH) and substance abuse (SA) disorders are addressed simultaneously by the same team of clinicians within the same organization (Mueser, 2003). Traditional sequential treatment (the treatment of one disorder, then treatment of the second disorder upon resolution of the first) or parallel treatment (treatment of both disorders by two different, non-communicative agencies) approaches have been repudiated by a wealth of research that demonstrates that an integrated, concurrent delivery of MH/SA treatment is unrivaled in its improvement of patient outcomes (Barrowclough et al., 2001; Carmichael, Tackett-Gibson, & Dell, 1998; Drake et al., 2001; Mangrum, Spence, & Lopez, 2006; Tiet & Schutte, 2012; Torrey et al., 2002). However, in many cases, SAMHSA's national call to action has been met with inaction. According to McGovern, Lambert-Harris, Gotham, Claus, and Xie (2014), scarcely 18% of addiction treatment centers and 9% of mental health programs met the criteria for dual diagnosis-capable services. This reality calls for a significant improvement of healthcare delivery for the 8.4 million individuals with dual diagnosis nation-wide (SAMHSA, 2014).

Background and Significance

Despite two decades of research showing that an integrated, concurrent delivery of mental health and substance abuse treatment is the most effective provision of care (Barrowclough et al., 2001; Carmichael et al., 1998; Drake et al., 2001; Mangrum et al., 2006; Tiet & Schutte, 2012; Torrey et al., 2002), only an estimated 4% of patients with dual diagnosis actually receive such integrated interventions (Drake & Bond, 2010). Data readily communicates the magnitude of the problem in a local municipality, revealing a known population of 95,000 and 111,000 individuals in the Nashville-Davidson-Murfreesboro-Franklin Metropolitan, Tennessee area diagnosed with a major depressive episode or substance use disorder over the previous year, respectively (defined by DSM-IV criteria) (SAMHSA, 2012); mental health and substance use disorders often devastatingly co-occur at rates of 20-35% (Grant et al., 2004; SAMHSA, 2015). The lack of behavioral health treatment programs with the capability to serve patients with dual diagnosis has negatively impacted treatment in this population—a population already primed for poorer outcomes, including higher rates of morbidity, relapse, chronic medical conditions, suicide, homelessness, violence, incarceration, hospitalization, and a lower quality of life (Abram & Teplin, 1991; Baillargeon, Binswanger, Penn, Williams, & Murray, 2009; Caton et al., 1994; Cuffel, Shumway, Chouljian, & Macdonald, 1994; Drake & Wallach, 1989; Drake et al., 1998; Haywood, Kravitz, Grossman, & Cavanaugh, 1995; Hunt, Bergen, & Bashir, 2002; Rosenberg et al., 2001; Swofford, Kasckow, Scheller-Gilkey, & Inderbitzin, 1996). Possible causes of this problem include an absence of specific practice benchmarks and programmatic guidance with which behavioral health programs/administrating authorities can assess and develop dual diagnosis capacity (Chaple & Sacks, 2014; McGovern, Lambert-Harris, McHugo, Giard, & Mangrum, 2010). As such, a project that investigates the side-by-side use of the COMPASS-EZ and the Dual Diagnosis Capability in Addiction Treatment (DDCAT) Toolkit (SAMHSA, 2011a; ZiaPartners, 2016)—evidence-based, integrated care evaluation indexes—could succeed in increasing dual diagnosis capabilities.

Purpose of Project

The purpose of this project is two-fold: (1) to use the COMPASS-EZ and DDCAT to evaluate the current dual diagnosis capability of a community-based behavioral health agency (CBHA); and (2) to develop and implement evidence-based recommendations to increase the agency's dual diagnosis capability.

Clinical/Practice Question

Using programmatic evaluation and guidance, can the COMPASS-EZ/DDCAT facilitate the development of an integrated, concurrent delivery of mental heath and substance abuse treatment in a community-based behavioral health agency?

CHAPTER 2: THE EVIDENCE BASE FOR INTEGRATED TREATMENT

Review of the Literature

Indeed, there is a significant problem in the treatment and outcomes of individuals with dual diagnosis, and a fierce response is needed to improve healthcare delivery. Integrated MH/SA treatment models for individuals with dual diagnosis have been shown to improve patient outcomes (Brunette, Mueser, & Drake, 2004). Research findings conclude that, when compared to usual care, an integrated, concurrent delivery of MH/SA treatment for dual diagnosis patients renders best treatment outcomes, including improved symptom severity and functioning (Barrowclough et al., 2001; Haddock et al., 2003; Schmitz et al., 2002), decreased frequency of inpatient hospitalization and relapse (Mangrum et al., 2006), increased engagement and retention in treatment programs (Hellerstein, Rosenthal, & Miner, 1995), lower rates of criminal activity and incarceration (Sacks, Sacks, McKendrick, Banks, & Stommel, 2004), and greater sustainability in remission and substance abuse recovery over time (Craig et al., 2008; Young, Barrett, Engelhardt, & Moore, 2014). Although integrated, concurrent MH/SA treatment delivery improves patient outcomes, there are challenges and barriers to wide-scale implementation and organizational redesign.

A better understanding of the barriers and strategies to the implementation of integrated and concurrent MH/SA treatment services would help guide behavioral health agencies as they seek to successfully increase dual diagnosis capability. A review of the literature reveals two primary system-/organizational level concerns impacting the capability of behavioral health agencies to implement an integrated, concurrent MH/SA treatment delivery model. First, at the federal, state, and local levels, mental health and substance use disorder agencies are traditionally identified as two different and often competing systems of care, each with its own separate policies, administrations of oversight and accountability, restricted funding streams, and varyingly credentialed personnel (Burnam & Watkins,

2006; Drake, Mueser, Clark, & Wallach, 1996; New Freedom Commission on Mental Health, 2003; Osher & Drake, 1996; Padwa, Larkins, Crevecoeur-MacPhail, & Grella, 2013; Ridgely, Goldman, & Willenbring, 1990; SAMHSA, 2002). Second, inadequate program structure, program milieus, assessment procedures, care coordination, treatment modalities, staffing, clinical knowledge/training, and continuity of care protocols fail to promote integrated service delivery for individuals with dual diagnosis (Lambert-Harris, Saunders, McGovern, & Xie, 2013; McGovern, Xie, Segal, Siembab, & Drake, 2006; McGovern et al., 2014; Padwa, Guerrero, Braslow, & Fenwick, 2015; Sacks et al., 2013; SAMHSA, 2005; Woltmann & Whitley, 2007).

Implementation Solutions to Organizational Barriers

Much work in research has served to identify a solution to confront the two competing systems of care, which presently fragment treatment for the individual with dual diagnosis and consume public funding streams at $82.2 billion dollars annually (SAMHSA, 2002). Separate funding appropriations and regulations do not support flexible financing or coordination across the substance abuse and mental health systems to foster better integrated service capacity for individuals with dual diagnosis. Thus, a most remarkable solution is engaging state and local stakeholders for a common vision, single administrative structure and regulatory standard in oversight and accountability, and a sustainable funding blueprint (Drake et al., 2001; Institute of Medicine, 2006; McGovern, Lambert-Harris, McHugo, Giard, & Mangrum, 2010; SAMHSA, 2003; Torrey et al., 2002). For example, a state-wide mental health and substance abuse integration system—administratively and financially established under one managed behavioral health care organization—underwent extensive trial in New Mexico (Hyde, 2004); the most recent outcomes of which have shown statistically significant increases in access to behavioral health services, increased quality/effectiveness of services, higher rates of patient participation in treatment planning, and increased global improvement (i.e., functioning and social connectedness) as compared to national data (New Mexico Behavioral Health Collaborative, 2013). Not only has MH/SA service integration shown to improve patient outcomes upon wide-scale implementation as noted in New Mexico, but integrated dual diagnosis services further reveal to do so at a substantial cost savings (French,

McCollister, Sacks, McKendrick, & De Leon, 2002; French, Sacks, De Leon, Staines, & McKendrick, 1999; Jerrell, Hu, & Ridgely, 1994). French et al. (2002) cite a healthcare cost savings of $836 per patient over a twelve-month period: modified therapeutic community (TC), integrated ($28,802) versus treatment-as-usual (TAU), control group ($29,638). An increasing number of future studies on the cost or cost savings of integrated dual diagnosis services are needed, and will further support policy development, funding, training, and wide-scale implementation.

Organizational barriers have also limited the capacity of behavioral health agencies to integrate both substance abuse and mental health treatment systems to meet the needs of persons with co-occurring MH/SA disorders (dual diagnosis). State and local behavioral health infrastructures at large are equipped to care for single, not co-occurring disorders. Agencies that provide services to individuals with dual diagnosis require guidance to understand the necessary program structure, staff make-up, clinical knowledge/training, assessment procedures, shared care coordination/treatment planning, or physical real estate needs for co-location of MH/SA treatment services. A notable solution well-embedded in the literature is the disseminated use of replicable, evidence-based evaluation tools and "roadmap" products demonstrated to facilitate successful treatment integration (Chaple & Sacks, 2014; Gotham, Claus, Selig, & Homer, 2010; Gotham, Brown, Comaty, McGovern, & Claus, 2013; Lambert-Harris et al., 2013; Matthews, Kelly, & Deane, 2011; McGovern, Matzkin, & Giard, 2007; McGovern, Lambert-Harris, Gotham, Claus, & Xie, 2014; Padwa et al., 2013; Sacks et al., 2013; SAMHSA, 2011b). With an organizational "roadmap" toward integration, these two systems of care unite to treat the most complex of behavioral health populations and advance to effectively treat difficult subpopulations as well. Difficult subpopulations include dual diagnosis clients who are *women*—greater rates of victimization and comorbid medical illness than dually diagnosed men (Alexander, 1996; Brunette & Drake, 1997; Goodman, Rosenberg, Mueser, & Drake, 1997); *minorities*—poorer access and higher likelihood of treatment in programs with fewer on-site psychiatric services (Grella & Stein, 2006); and/or *persons with extensive trauma history* due to an increased severity of symptoms, isolation, and relapse (Mueser et al., 1998).

What remains unknown from existing literature is the longitudinal outcome of New Mexico's state-wide mental health/substance abuse integration system under one managed behavioral health care organization. New Mexico is exceptionally one of the first states to carry forward such "a comprehensive approach, not only to planning but to redesigning the financing and oversight of services previously funded, provided, or managed by 15 state departments" (Hyde, 2004, p.1). Though existing research is robust and unified in its identification of the aforementioned barriers and strategies, the strength of the evidence base regarding the strategic use of a programmatic evaluation tool to improve and assess dual diagnosis capability is limited to a certain degree by study design and a smaller sample size, which has the potential to restrict the statistical power, validity, and generalizability of the findings. In addition, a number of programmatic studies have determined that perhaps different integrated treatment interventions are needed for dual diagnosis clients who are women (Alexander, 1996; Brunette & Drake, 1997; Goodman, Rosenberg, Mueser, & Drake, 1997); minorities (Grella & Stein, 2006); and/or persons with extensive trauma history and sequelae (Mueser et al., 1998); however, to date this writer is unaware of any available data on outcomes of respective program modifications within the integrated treatment model for these subgroups. Further research is needed to close the gap between actual and recommended care delivery.

CHAPTER 3: CONCEPTUAL AND THEORETICAL FRAMEWORK

Introduction

The Transtheoretical Model of Behavior Change (TTM)/Stages of Change, which was developed by Prochaska and colleagues (DiClemente & Prochaska, 1982), has been applied to integrated service delivery and contexts of organizational science, providing a systematic way to view the health care delivery phenomena of interest (i.e., understand the factors the might influence the organizational change being targeted as well as guide the actions/strategies/outcomes of effective organizational change). Initially applied to individuals and later adapted to organizations, the TTM proposes that individuals/organizations are at different stages of readiness to adopt positive change (Prochaska, Velicer, DiClemente, & Fava, 1988). TTM also posits that individual behavior change/organizational change is a sequential, cyclical process that occurs over time in the following stages: precontemplation, contemplation, preparation, action, and maintenance (Prochaska, DiClemente, & Norcross, 1992). There are three organizing constructs of the model: decisional balance (i.e., weighing of pros and cons), self-efficacy (i.e., confidence in ability to change), and ten processes of change (consciousness raising, dramatic relief, environmental reevaluation, self-reevaluation, social liberation, self-liberation, stimulus control, counter-conditioning, reinforcement management, and helping relationships—i.e., strategies facilitating stage progression) (DiClemente & Prochaska, 1998; Prochaska & Velicer, 1997). Each organizing construct elucidates how successful individual/organizational change may occur and predicts the likelihood of such change (DiClemente & Prochaska, 1998; Prochaska & Velicer, 1997). Several of the TTM concepts and conceptual relationships described above, including the five stages of change, decisional balance, self-/collective efficacy, and the ten processes of change, have proved useful in research-based studies for assessing, explaining, or predicting whether a collective organization is ready to implement a specific change toward best practice, greater quality of care/safety, or improved treatment

outcomes (Boswell, 2011; Cunningham et al., 2002; Levesque, Prochaska, & Prochaska, 1999; Levesque et al., 2001; Prochaska, 2000; Prochaska et al., 2006; Silver, Prochaska, Mederer, Harlow, & Sherman, 2007; Whysall, Haslam, & Haslam, 2007).

Application to Project

When adapted to this Doctor of Nursing Practice (DNP) scholarly project, the TTM framework can be used to guide the assessment, explanation, and facilitation of mental health agencies' readiness to implement an integrated, concurrent delivery of mental health and substance abuse treatment. For example, in initial evaluation methods, structured interview questions for organization administrators, staff, and patients would be designed to identify organizational characteristics that define and facilitate successful integration of mental health and substance abuse treatment services. Indeed, interviews could gather important information about confidence in an organization's ability to change (self-/collective efficacy), the pros and cons of mental health and substance abuse service integration (decisional balance) and the classification of the change processes or organizational strategies being utilized (Cunningham et al., 2002; Prochaska et al., 2006; Whysall et al., 2007). Structured interview questions and participant responses would aid in distinguishing a mental health agency's current, categorical readiness to change as perceived by administrators, staff, and patients. Upon a categorical identification of the organization's readiness for change (i.e., pre-contemplation, contemplation, preparation, action, or maintenance stage), the ten processes of change could be stage-matched and utilized in accordance with the categorized stage of change to facilitate a mental health agency's progression toward successful implementation of an integrated, concurrent mental health and substance abuse treatment delivery. Stage-matched interventions/strategies increase the likelihood that individuals or organizations will act toward intentional change (Prochaska, DiClemente, Velicer, & Rossi, 1993; Rakowski et al., 1998).

Further, TTM empirical support has shown strength in use of the ten processes of change to facilitate individual/organizational change; experiential processes are mostly observed and/or demonstrated effective in the early stages of change, while action-oriented behavioral processes are mostly observed and/or demonstrated effective in the later stages of change (Boswell, 2011; Levesque et

al., 2001; Levesque et al., 1999; Prochaska, 2000). Change initiatives and recommendations could then be tailored and developed to increase a mental health agency's dual diagnosis capability according to the specific concerns or needs of an organization and in congruence with their readiness to change/stage of change. For example, if a particular mental health agency is assessed as currently in the *contemplation* stage of change, the experiential process of *consciousness-raising* could be effectively utilized to facilitate progression toward successful organizational change—increasing the agency's awareness about the evidence surrounding integrated, concurrent mental health and substance abuse treatment and its benefits as a best practice. Alternatively, if a particular mental health agency were assessed in the later stages of change of *action,* the behavioral process of *stimulus control* could be effectively utilized to facilitate progression toward successful organizational change. This could include restructuring the healthcare environment to remove cues for organizational status quo and adding cues for an integrated, concurrent delivery of mental health and substance abuse treatment (i.e., electronic calendar reminders for weekly, mandatory case staffing between mental health and substance abuse providers). Use of the TTM illustrates that at the core of any successful organizational change is a successful change in organizational members' behavior. Not only is the theoretical framework relevant in guiding this DNP project's planned intervention (program evaluation and guided organizational change efforts via COMPASS-EZ and DDCAT), but the TTM also elucidates the problem in the treatment of individuals with co-occurring mental health and substance use disorders: dual diagnosis patients differ in their processes of adopting new behaviors; thus, different treatment interventions are required for effective healthcare delivery (Finnell, 2003).

CHAPTER 4: DETAILING THE DNP PROJECT

Project Design

The DNP scholarly project is conducted as a joint program evaluation and quality improvement initiative, utilizing dual baseline evaluation instruments—DDCAT Index and the COMPASS-EZ—to assess a total of 22 programmatic domains of care and address the co-occurring capabilities of a single community addiction treatment center for pregnant and postpartum women. The Centers for Disease Control and Prevention [CDC] (2012) defines program evaluation (PE) as the "the systematic collection of information about the activities, characteristics, and outcomes of programs to make quality judgments about the program, improve program effectiveness, and/or inform decisions about future program development" (p.1). Quality improvement (QI) is defined as "systematic and continuous actions that lead to measurable improvement in health care services and the health status of targeted patient groups" (Health Resources and Services Administration [HRSA], 2011, p.1). Global literature, reformed nursing education, and 21st century prominent healthcare initiatives uphold program evaluation and quality improvement as project designs of valuable and appreciating worth—and when conducted, the end results of which guide and equip the well-positioned DNP practitioner to lead systems-level change aligned with the IHI Triple Aim—improving the health of populations, the patient experience of care, and the reduction of healthcare costs per capita (American Association of Colleges of Nursing, 2006; Institute for Healthcare Improvement [IHI], 2016; World Health Organization [WHO], 1981). Effective April 04, 2016, IRB determined this joint QI/PE initiative (Study #: 16-1073) as exempt from review. To note, projects designed for program evaluation and/or quality improvement do not commonly meet criteria for university Institutional Review Board (IRB) and are frequently granted exemption under category 2 of the U.S. Department of Health and Human Services [DHHS] "Common Rule", 45 CFR part 46, for the protection of human subjects (University of North Carolina at Chapel Hill, 2016).

Methodology

Setting. The selected community-based behavioral health agency is Renewal House—a single, non-profit addiction treatment center for pregnant and postpartum women located in central southeastern United States, in downtown Nashville, Tennessee (3410 Clarksville Pike, Nashville, TN 37218). Renewal House is distinguished as "Nashville's first, largest and most comprehensive residential recovery program for addicted women and their children" (Renewal House, 2013a, p.1). In twenty-one years since establishment in 1996, Renewal House has expanded, adding the Women's Intensive Outpatient Program and the Celebrating Families Program to its already robust Family Residential Program (Renewal House, 2013c). Together, these three programmatic areas serve a population census of 70-85 persons annually and bring life to the mission of Renewal House to: "foster healing, resiliency and continuing recovery to enhance family health, allowing families to restore, renew, and recover their lives together" (Renewal House, 2013b, p.1).

Measures. The COMPASS-EZ is a self-assessment tool developed by ZiaPartners, Inc. (2016), measuring baseline levels of co-occurring capability and designed for applied QI within behavioral health institutions. The DDCAT Index is a psychometrically valid and reliable instrument (correlation coefficient = $p < .01$; median kappa coefficient = $p < .05$) developed by SAMHSA (2011a) for purposes of program-level assessment, rating capacity to deliver treatment services to clients with co-occurring disorders. The instruments independently detail the project's dual programmatic evaluation with specific instruction.

Procedures. The agency's baseline capability to provide an integrated, concurrent delivery of mental health and substance abuse treatment was measured using both the COMPASS-EZ and the DDCAT Index. This doctoral student (an external evaluator) collected information about the agency across five clinical site visits and rated agency 'readiness'/capacity to address co-occurring substance use and mental health disorders using the following data collection methods: (a) ethnographic observations of the milieu and physical settings, to include observational sessions of the mental health program and the substance abuse outpatient treatment program, to include group therapy and celebrating families'

activities at Renewal House; (b) focused interviews with the agency director, clinical supervisors, medication prescribers, clinicians, support personnel, and clients; and (c) review of documentation (program policy and procedure manuals, brochures, daily patient schedules, intake screening forms, eight to ten medical records for individual prior identified as having co-occurring disorders, and other pertinent materials).

Divided into 35 indexed items within seven practice domains (program structure, program milieu, assessment, treatment, continuity of care, staffing, and training), the domain information collected is rated on a 1-5 scale as outlined by the DDCAT scoring profile. The overall rated score categorically corresponds to the agency's co-occurring capability as either "Addiction Only Services" (AOS), "Dual Diagnosis Capable" (DDC), or "Dual Diagnosis Enhanced" (DDE). Alternatively, the COMPASS-EZ divides 69 indexed items within fifteen practice domains (program philosophy, program policies, quality improvement and data, access, screening and identification, recovery-oriented integrated assessment, integrated person-centered planning, integrated treatment/recovery programming, integrated treatment/recovery relationships, integrated treatment/recovery program policies, psychopharmacology, integrated discharge/transition planning, program collaboration and partnership, general staff competencies and training, and specific staff competencies). The COMPASS-EZ domain information collected is similarly rated on a 1-5 scale, categorically corresponding to the agency's demonstrated co-occurring capabilities within each domain as either "Not at all", "Slightly", "Somewhat", "Mostly", or "Completely". Evidence-based, actionable recommendations are then specifically developed and implemented to increase dual diagnosis capabilities at Renewal House. Implementation activities toward an integrated, concurrent MH/SA treatment are determined using COMPASS-EZ/DDCAT's five score-rated outcome indicators. A respective score of 5 (i.e., "Dual Diagnosis Enhanced" and/or a designation of "Completely") is the highest categorical level of MH/SA treatment integration across all practice domains, guiding the necessary practice change(s) within the agency, one domain at a time.

CHAPTER 5: RENEWAL HOUSE DUAL-MEASURE EVALUATION RESULTS

TABLE 1: COMPASS-EZ Analyzed Results (Aim 1)

		Rating scale					
Dimension	**Description**	**1**	**2**	**3**	**4**	**5**	**Score**
Program Philosophy	The program operates under a written vision, mission or goal statement that officially communicates to all staff and stakeholders the agency-wide goal of all of its programs becoming welcoming, recovery-oriented, and complexity (co-occurring) capable				✔		4.80
	Written program descriptions specifically say that individuals and families with complex (co-occurring) issues are welcomed for care					✔	
	Written program descriptions specifically say that individuals and families with complex (co-occurring) issues will be helped to use their strengths to address all their issues in order to achieve their goals					✔	
	The program environment (e.g., waiting room, treatment spaces, wall posters, flyers) creates a welcoming atmosphere that supports engagement and recovery for individuals and families with both mental health conditions and substance use conditions					✔	
	Program brochures for clients welcome individuals and families with complex (co-occurring) issues into service, and offer hope for recovery					✔	
Program Policies	Program billing instructions support delivery of integrated approaches within each billing event					✔	4.33 (5.00)

	The program confidentiality or release of information policy is written to promote appropriate routine sharing of necessary information between mental health providers, substance abuse providers, and medical providers to promote quality of care					✔	
	Clinical recordkeeping policies support documentation of integrated attention to mental health, health, and substance use issues in a single process note and in a single client chart or record			✔ ***		→→	
Quality Improvement and Data	The program has a culture of empowered partnership in which leadership, supervisors, representative frontline staff (clinical and support) and consumers and families work together to design and implement a vision of recovery-oriented complexity (co-occurring) capable services					✔	4.20
	The program has a continuous quality improvement team, with representation from leadership, supervisors, frontline staff, and consumers and families, that meets regularly and uses a written plan to guide, track, and celebrate progress toward being recovery-oriented and complexity (co-occurring) capable					✔	
	The program has identified and empowered change agents or champions to assist with the continuous quality improvement process					✔	
	Program management information systems are designed to collect accurate data on how many individuals in the program have complex (co-occurring) issues			✔ ***			

	Program management information systems in infant/child/youth services are designed to collect data on how many families served have complex (co-occurring) issues.			✔ ***			
Access	The program has "no wrong door" access policies and procedures that emphasize welcoming and engaging all individuals and families with complex (co-occurring) issues from the moment of initial contact					✔	5.00
	Individuals and families receive welcoming access to appropriate service regardless of active substance use issues (e.g., blood alcohol level, urine toxicology screen, length of sobriety, or commitment to maintain sobriety)					✔	
	Individuals and families receive welcoming access to appropriate service regardless of active mental health issues (e.g., active symptoms, type of psychiatric diagnosis, or type of prescribed psychiatric medications, such as antipsychotics, stimulants, benzodiazepines, opiate maintenance)					✔	
Screening and Identification	The program's screening policy states that all individuals are to be screened in a welcoming and respectful manner for complex (co-occurring) mental health issues (including trauma), substance use issues, medical issues, and basic social needs, and for immediate risk concerns in each of these areas			✔ ***		→→	4.00 (4.33)

	The program uses screening processes, checklists, and/or tools for each complex (co-occurring) issue that are appropriately matched to the population being screened					✔	
	Staff follow a procedure for clearly documenting positive screenings for complex (co-occurring) issues in the program data system					✔	
	The program has a screening process for identifying and documenting co-occurring nicotine use/dependence					✔	
	The program has a clear protocol on how to facilitate access to primary health care for every client			✔ ***			
	The program has a formal screening procedure for identifying high-risk infectious diseases, including Hepatitis C, HIV and TB			✔ ***			
Recovery-oriented Integrated Assessment	Assessments document individual and/or family goals for a hopeful, meaningful and happy life using the person's/family's own words					✔	5.00
	The assessment identifies and elaborates on a specific time period of recent strength or stability, and skills and supports that the individual or family used in order to do relatively well during that time					✔	
	The assessment documents data to support the presence of a substance use/gambling issue or diagnosis, including distinguishing between use, abuse and dependence for each substance or behavior					✔	
	The assessment documents current and past information to support the identification of a mental health issue or diagnosis when present, including if possible, describing mental health symptoms during previous periods of non-harmful substance use or sobriety					✔	

	Assessments routinely document each complex (co-occurring) condition, active or stable, when previously diagnosed or when identified/diagnosed during the current assessment process					✔	
	The assessment documents the stage of change (i.e., precontemplation, contemplation, preparation, early action, etc.) the individual is in regarding each disorder, condition or issue					✔	
Integrated Person-centered Planning	The person's/family's hopeful goals, recent successes and strengths are the foundation of the service plans					✔	4.75
	Service plans list all the relevant complex (co-occurring) issues in the plan					✔	
	For each of the complex (co-occurring) issues listed in the plan, there is an identified stage of change, stage-matched interventions, and achievable steps to help the person feel and be successful					✔	
	Person-centered plans focus on building skills and supports, using positive rewards for small steps of progress in learning and using skills and supports				✔		
Integrated Treatment/Recovery Programming	Educational materials about complex (co-occurring) disorders and recovery are routinely provided to clients and families					✔	4.67
	All clients are engaged in group or individual work that provides basic education and assistance with choices and decisions regarding complex (co-occurring) issues					✔	
	Clients have access to group programming that is matched to their stage of change for each issue			✔ ***			

	There are specific group or individual interventions for all clients providing education about psychiatric medications, including how to take medication as prescribed, and how to take medications more safely if continuing to use substances					✔	
	There are specific co-occurring skills manuals that are used regularly in the program for individual or group skill building regarding complex (co- occurring) conditions, such as manuals on managing trauma symptoms while in addiction treatment, or sobriety skill building while in mental health treatment					✔	
	Clients with complex (co-occurring) issues are helped to get involved with individual and group peer support for both mental health and substance use issues, including dual recovery support programs					✔	
Integrated Treatment/Recovery Relationships	Each client has a primary relationship with an individual clinician or team of clinicians that integrates attention to complex (co-occurring) issues inside the relationship					✔	5.00
	The primary clinician or team continues working with the client on each issue even when the person may still be using substances, may not be taking medication as prescribed, or may be having trouble following other aspects of the treatment plan					✔	
	Each clinical staff person on the team directly provides and documents the delivery of integrated services					✔	
Integrated Treatment/Recovery Program Policies	Program policies state clearly that individuals are not routinely discharged or "punished" for substance use, displaying mental health symptoms, or having trouble following a treatment plan					✔	4.25

	Program policies and procedures are designed to reward individuals for asking for help when they are having difficulty or beginning to relapse with any issue					✔	
	Integrated service plans and behavioral policies provide for positive reward for small steps of progress in addressing any problem, rather than focusing on negative consequences for "treatment failure," "relapse," "inappropriate behavior," or "non-compliance."					✔	
	For clients with complex (co-occurring) issues who are also involved with the court or with child welfare, integrated service plans are designed to reward small steps of progress to help clients be successful with their multiple issues, not just to monitor compliance with external mandates			✔ ***			
Psychopharmacology	Whether prescribing is done on- or off-site, there are procedures, forms, and materials to help clients learn about medications, communicate openly with prescribers, and take medication as prescribed					✔	4.83
	The program provides and documents for all clients routine communication between clinical staff and medical and mental health prescribers				✔		
	Policies or practice guidelines specify access to medication assessment and prescription without requiring a mandatory period of sobriety					✔	
	Policies or practice guidelines ensure that necessary medications for treatment of serious mental illness are appropriately maintained even though clients may continue to use substances					✔	

	Medications with addictive potential (e.g., benzodiazepines) are neither routinely initiated nor routinely refused in the ongoing treatment of individuals with substance dependence. Prescription of such medications is individualized based on evaluation and consultation or peer review					✔	
	Medications used specifically for treatment of substance use disorders are prescribed routinely for clients who might benefit from such medications as part of their treatment					✔	
Integrated Discharge/Transition Planning	Discharge plan policies, procedures, practices and forms address specific stage-matched continuing care requirements for each complex (co-occurring) issue			✔ ***		→→	4.00 (5.00)
	Each discharge plan for individuals and/or families with complex (co-occurring) issues provides for continuing integrated care with a clinician or team, ideally in a single setting					✔	
Program Collaboration and Partnership	The program has developed a network of partner programs offering differing services to function as a learning collaborative to develop its own recovery-oriented complexity (co-occurring) capability and to help other programs do the same					✔	4.20 (5.00)
	The program has policies and procedures for documentation of care coordination and collaborative service planning for clients with complex (co-occurring) issues who attend services in another program	✔ ***				→→	
	There is a routine process where program staff provide complexity (co-occurring) consultation (ideally on site) to a collaborative program providing services in the “other” domain					✔	

	There is a routine process where program staff receive complexity (co-occurring) consultation (ideally on site) from a collaborative program providing services in the "other" domain					✔	
	Designated program clinicians participate in a regularly scheduled mental health and substance abuse provider interagency care coordination meeting that addresses the needs of individuals and/or families with complex (co-occurring) issues					✔	
General Staff Competencies and Training	There are specific recovery-oriented complexity (co-occurring) competencies for all staff included in human resource policies and job descriptions				✔		3.50 (4.67)
	The program has a written scope of practice for complexity (co-occurring) competency for all clinicians trained or licensed in only one area of service (e.g., licensed or formally trained in mental health OR substance abuse, but not both)				✔		
	The program has written procedures for routinely documenting complex (co-occurring) issues and interventions provided by any clinician with any level of licensure or training		✔ ***			→→	
	The program has a written plan for recovery-oriented complexity (co-occurring) competency development (e.g., supervision, training activities) related to all staff (e.g., clinical, support, management)					✔	
	Supervisors have the appropriate knowledge and skills to help staff become more welcoming, recovery-oriented and complexity (co-occurring) competent					✔	
	Recovery/resiliency and complexity (co-occurring) competencies are evaluated as part of annual staff performance reviews	✔ ***				→→	

Specific Staff Competencies	The program staff demonstrate competency to welcome and address the needs of clients with complex (co-occurring) issues who are from different cultural and linguistic backgrounds					✔	5.00
	The program staff demonstrate specific competency in working on complex (co-occurring) issues with clients who have cognitive impairments (e.g., clients with learning disabilities, intellectual impairments, thought processing difficulties)					✔	
	The program staff demonstrate specific competency in providing family support, family psychoeducation, family-to-family peer support, and in addressing complex (co-occurring) issues with families in the context of these individual or group interventions					✔	
	The program staff demonstrate specific competency in providing developmentally matched services to seniors and older adults with complex (co-occurring) issues					✔	
	The program staff demonstrate specific competency in providing developmentally matched services to children and youth with complex (co-occurring) issues					✔	

TABLE LEGEND: COMPASS-EZ RATING SCALE	
(1.00)	Not At All
(2.00)	Slightly
(3.00)	Somewhat
(4.00)	Mostly
(5.00)	Completely

TABLE SYMBOLS: COMPASS-EZ RATING SCALE	
****	Indicates QI Recommendation (Possible Combined Listing)
( )	New Average Domain Score Facilitated via QI Action (Results Expected If All Conditions Met)
→→	Indicates QI Action Implemented
NR	No Recommendation (Next Level Recommendation Not Appropriate Given Agency Infrastructure)
✔	Sub-Item Baseline Evaluation Score

TABLE 2: DDCAT Analyzed Results (Aim 1)

		Rating scale					
Dimension	**Description**	**1**	**2**	**3**	**4**	**5**	**Score**
Program Structure	Primary focus of agency is co-occurring as stated in the mission statement			✔ ***			4.50
	Organizational certification and licensure					✔	
	Coordination and collaboration with mental health services					✔	
	Financial incentives					✔	
Program Milieu	Routine expectation of and welcome to treatment for both disorders			✔ ***			3.50
	Display and distribution of literature and patient educational materials				✔		
Clinical Process: Assessment	Routine screening methods for mental health symptoms					✔	4.00
	Routine assessment if screened positive for mental health symptoms					✔	
	Mental health and substance use diagnoses made and documented					✔	
	Mental health and substance use history reflected in medical record				✔		
	Program acceptance based on mental health symptom acuity: low, moderate, high			✔ ***			
	Program acceptance based on severity and persistence of mental health disability: low, moderate, high			✔ ***			
	Stage-wise assessment			✔ ***			
Clinical Process: Treatment	Treatment plans					✔	4.20
	Assess and monitor interactive courses of both disorders					✔	

	Procedures for mental health emergencies and crisis management					✔	
	Stage-wise treatment				✔		
	Policies and procedures for medication evaluation, management, monitoring, and compliance					✔	
	Specialized interventions with mental health content				✔		
	Education about mental health disorders, treatment, and interaction with substance use disorders				✔		
	Family education and support				✔		
	Specialized interventions to facilitate use of peer support groups in planning or during treatment			✔ ***			
	Availability of peer recovery supports for patients with co-occurring disorders			✔ ***			
Continuity of Care	Co-occurring disorders addressed in discharge planning process				✔		3.60
	Capacity to maintain treatment continuity [Indefinitely]			✔ NR			
	Focus on ongoing recovery issues for both disorders					✔	
	Specialized interventions to facilitate use of community based peer support groups during discharge planning			✔ ***			
	Sufficient supply and compliance plan for medications is documented			✔ ***			
Staffing	Psychiatrist or other physician or prescriber of psychotropic medications		✔ ***				4.00
	On-site clinical staff members with mental health licensure (doctoral or masters level), or competency or substantive experience				✔		

	Access to mental health clinical supervision or consultation					✔	
	Case review, staffing or utilization review procedures emphasize and support co-occurring disorder treatment					✔	
	Peer/Alumni supports are available with co-occurring disorders (volunteer staff)				✔		
Training	All staff members have basic training in attitudes, prevalence, common signs and symptoms, detection and triage for co-occurring disorders					✔	4.50
	Clinical staff members have advanced specialized training in integrated psychosocial or pharmacological treatment of persons with co-occurring disorders				✔		

TABLE LEGEND: DUAL DIAGNOSIS CAPABILITY RATING SCALE	
(1.00 – 1.99)	Addiction Only Services (AOS)
(2.00 – 2.99)	AOS/DDC
(3.00 – 3.49)	Dual Diagnosis Capable (DDC)
(3.50 – 4.49)	DDC/DDE
(4.50 – 5.00)	Dual Diagnosis Enhanced (DDE)

TABLE SYMBOLS: DUAL DIAGNOSIS CAPABILITY RATING SCALE	
****	Indicates QI Recommendation (Possible Combined Listing)
( )	New Average Domain Score Facilitated via QI Action (Results Expected If All Conditions Met)
→→	Indicates QI Action Implemented
NR	No Recommendation (Next Level Recommendation Not Appropriate Given Agency Infrastructure)
✔	Sub-Item Baseline Evaluation Score

Figure 1: COMPASS-EZ Programmatic Evaluation Scores (Domain-Specific)

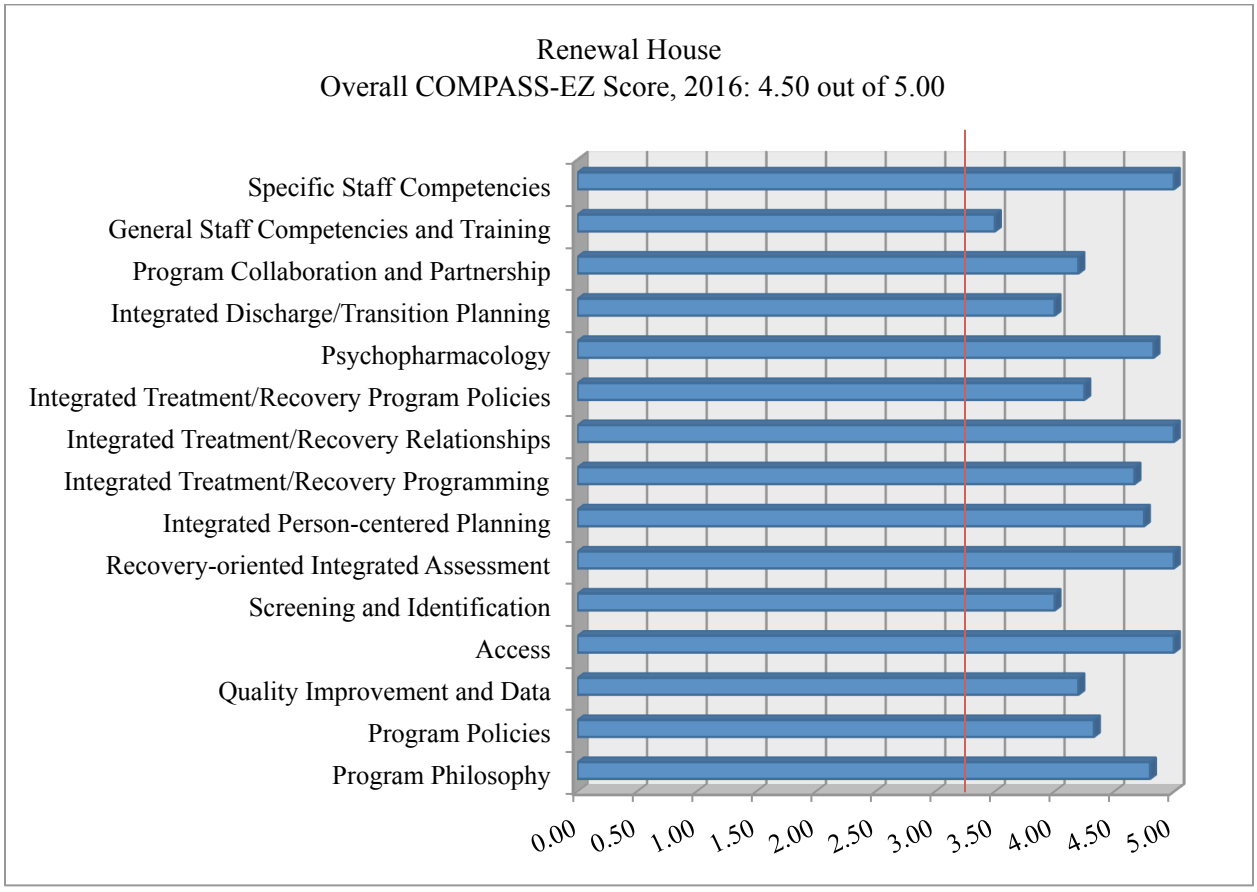


Figure 2: DDCAT Programmatic Evaluation Scores (Domain-Specific)

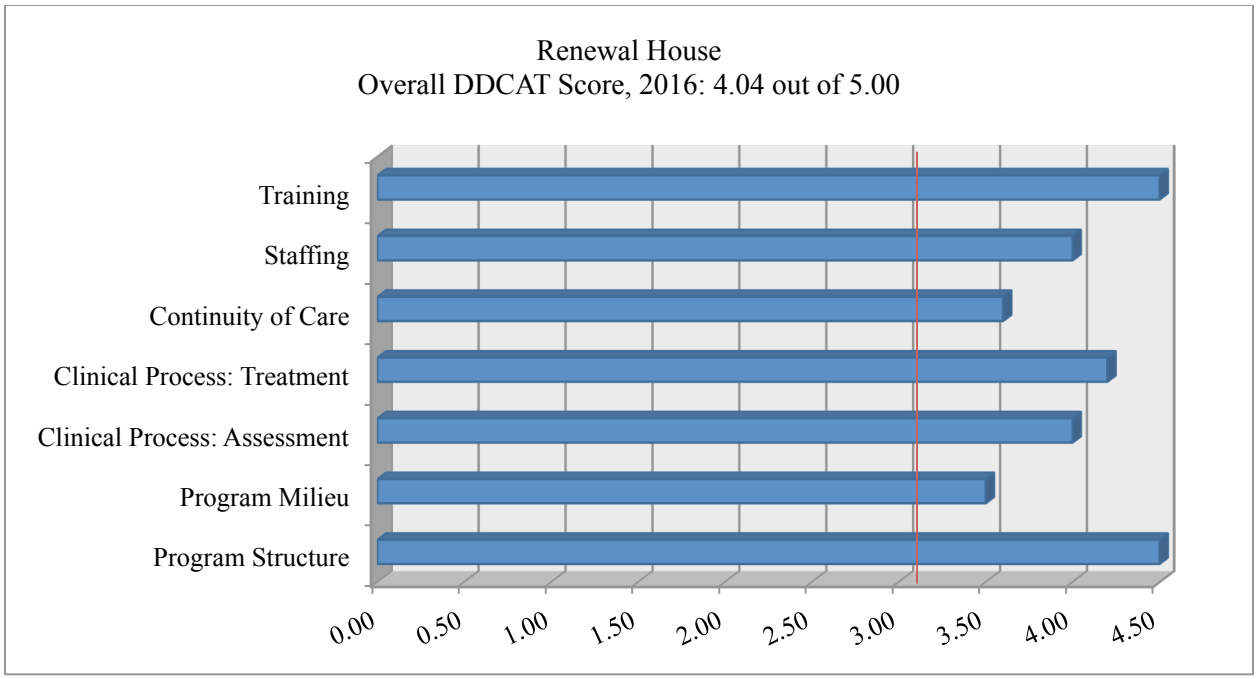


Figure 3: Categorical % of Mental Health and Substance Abuse Treatment Integration (COMPASS-EZ)

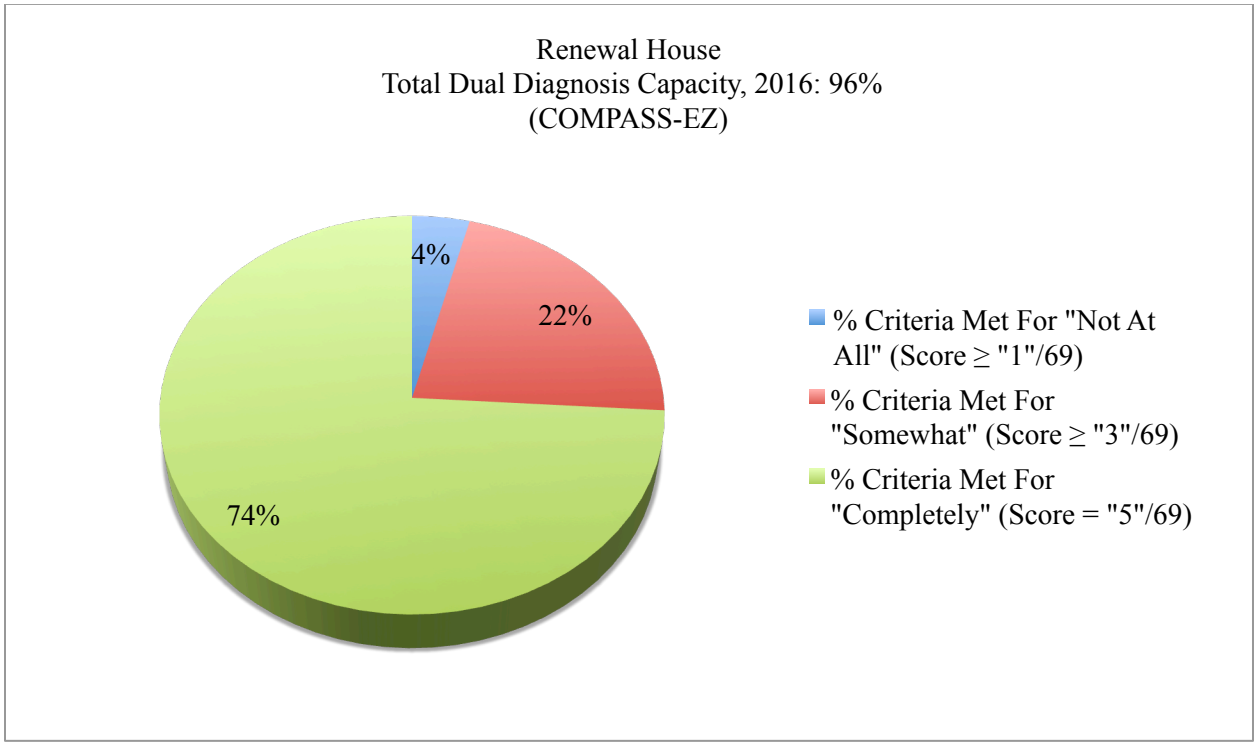
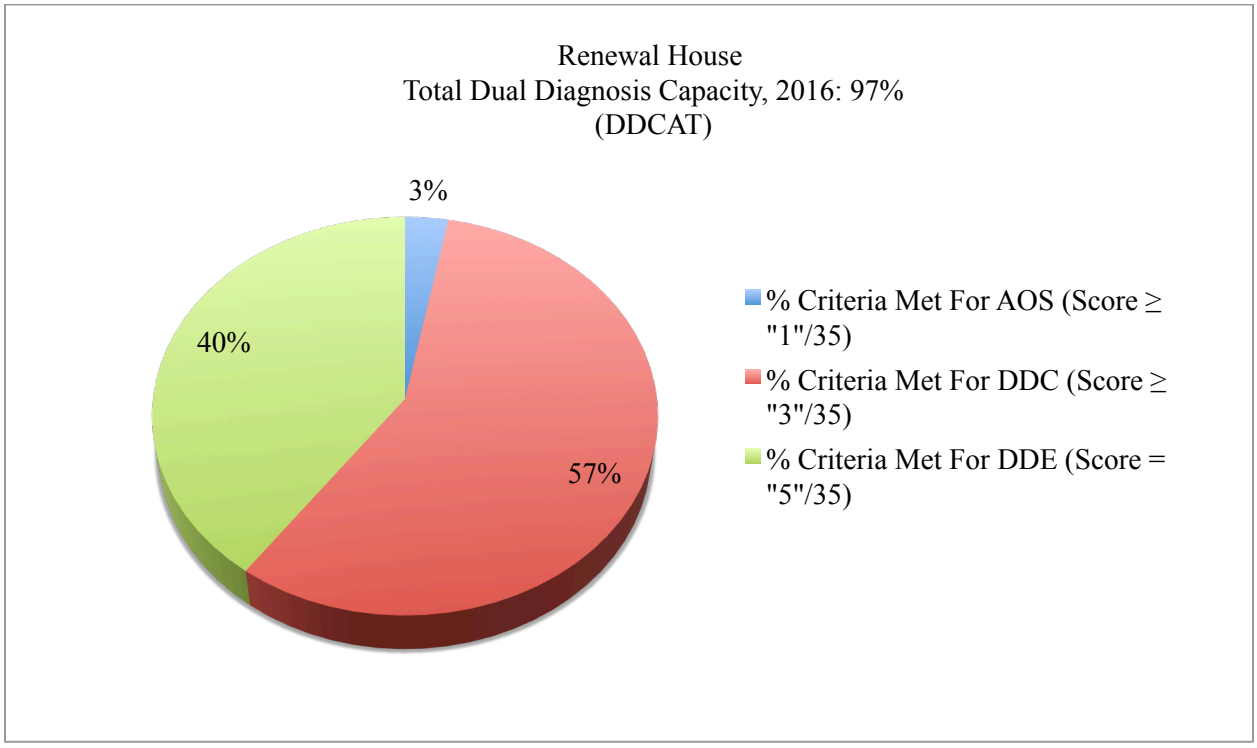


Figure 4: Categorical % of Mental Health and Substance Abuse Treatment Integration (DDCAT)



Agency Recommendations for Quality Improvement Action (Aim 2)

COMPASS-EZ and DDCAT items within each domain scoring equal to or less than '3' were recorded for recommendation, each representing a specific dual diagnosis capability in need of improvement. Guided action in each of these items is required in order to reach the highest level of capacity for MH/SA treatment integration (i.e., "Dual Diagnosis Enhanced" and/or a designation of "Completely"). In accordance, the following QI recommendations were submitted to Renewal House:

DDCAT

(1) Secure on-site staff psychiatrist or contracting physician for clinical supervision, treatment team, and medication management in program/agency until admission to next level of care at different provider; sufficient prescription supply and compliance plan documented.

(2) Program routinely focuses on persons with co-occurring disorders (to include welcome position, stage-wise assessment and documentation), not primarily addiction; admittance and treatment not limited by acuity/severity/disability of mental health disorder. **Note:** Renewal House admission by-laws are grounded on a presenting substance use disorder; clients diagnosed with mental health disorder unaccompanied by a substance use disorder are not eligible for admission.

(3) Availability of peer recovery and family supports (on-site or off-site facilitation/integration into program) specific to both disorders; interventional use in treatment and discharge planning.

COMPASS-EZ

(4) Clinical recordkeeping policies designed to support documentation of integrated attention to mental health, health, and substances use issues in a single process note and in a single client chart or record.

(5) The program's screening policy should clearly state that all individuals are to be screened in a welcoming and respectful manner for complex (co-occurring) mental health issues (including trauma), substance use issues, medical issues, and basic social needs, and for immediate risk concerns in each of these areas.

(6) The adoption of program information systems designed to collect data on how many individuals

and/or families served have co-occurring mental health and substance use disorders.

(7) The program adoption of a formal screening procedure for identifying high-risk infectious diseases, including Hepatitis C, HIV and TB.

(8) The program adoption of a screening process for identifying and documenting co-occurring nicotine use/dependence.

(9) The program development of a clear written protocol on how to facilitate access to primary health care for every client.

(10) Develop group programming matched to client stage of change for each MH/SA issue.

(11) Establish program policies and procedures for documentation of care coordination and collaborative service planning for clients with complex (co-occurring) issues attending and/or obtaining services from an outside agency.

(12) Integrated service plans designed to reward small steps of client progress toward success with multiple issues (to include involvement with the court or child welfare).

(13) Discharge plan policies, procedures, practices and forms designed to address specific stage-matched continuing care requirements for each complex (co-occurring) issue.

(14) The program development of written procedures for routinely documenting complex (co-occurring) issues and interventions provided by any clinician with any level of licensure or training.

(15) Recovery/resiliency and complexity (co-occurring) competencies added in evaluation measures as part of annual staff performance reviews.

Quality Improvement Implementation: End Products/Deliverables (Aim 2)

Quality improvement recommendations for increased dual diagnosis capabilities were objectively reported and a scheduled time established for roundtable discussion on future action(s). Renewal House reviewed the aforementioned recommendations in terms of priority and service outcome for the agency, ranking highest priority as “1” and lowest priority as “15” among the fifteen listed recommendations. Implementation for the following three policy actions (combining six QI recommendations) were elected as priority and as having maximum service impact within the community-based behavioral health agency

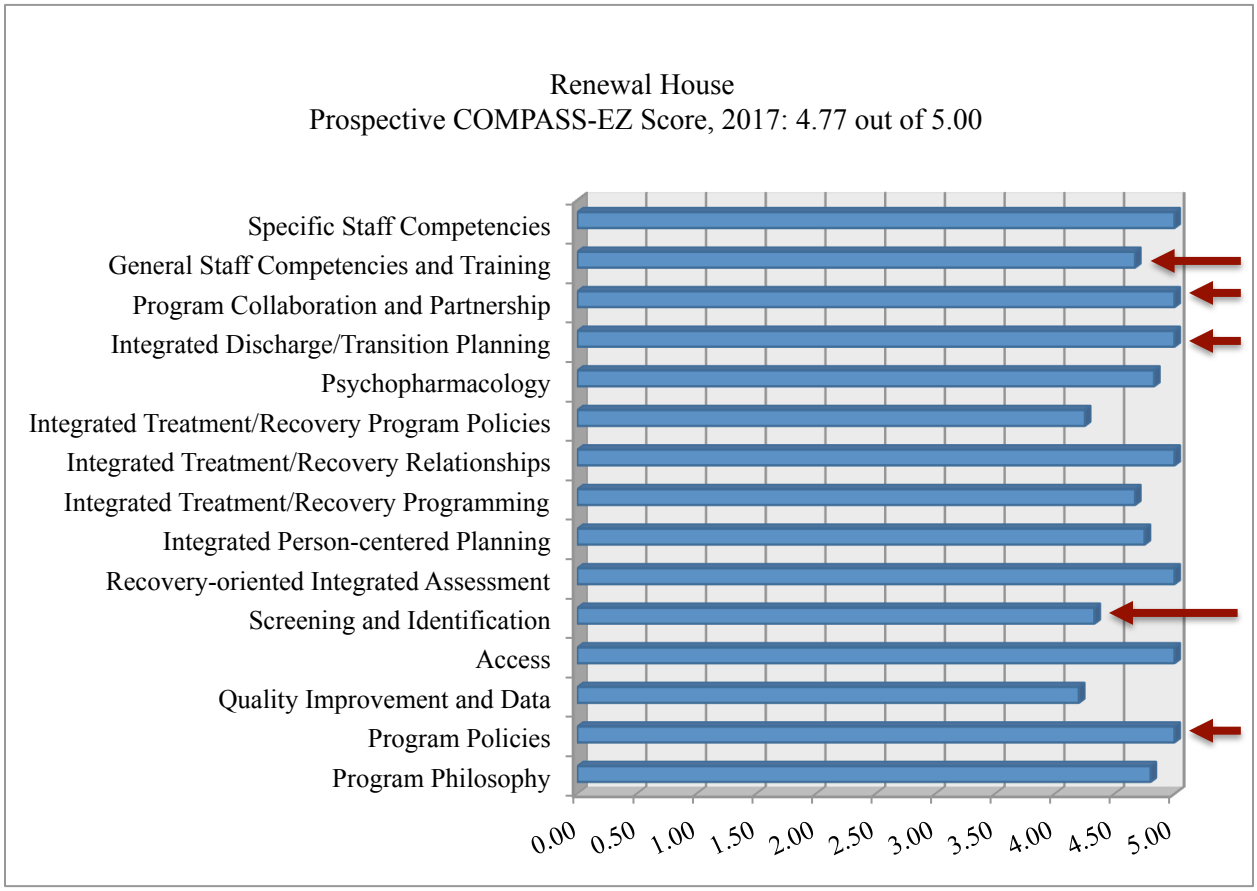
with respect to organizational mission, vision, resource, state funding mechanism, and time: Clinical Recordkeeping (Documentation) Policy, Client Discharge Plan Policy, and Annual Staff Performance Review/Competency Assessment Policy. All three identified policies were revised and developed in compliance with insurer administration guidelines and meet full DD criteria congruent with an evaluation domain score of "5" (Amerigroup Community Care, 2016; BlueCross BlueShield of Tennessee, 2016; UnitedHealthcare, 2016); final independent review and formal approval conducted by Renewal House board of directors and program committee [see Appendices 1, 2, and 3 for detailed policies in form].

Post-QI Implementation: Results Expected If All Conditions Met

The undertaking of changing policy and thereby improving system processes required considerable collaboration, repeated revision, and a respectful deliberation for second-/third-/fourth order effects. Post-QI results of this project denote organizational readiness for change and commitment to continuous QI as related to agency aptitude for increased DD capability. Successful policy development occurred over a six-month implementation period owed in full to the agency's prevailing commitment to continuous QI—a continuous bow to serve, search to serve, evaluate service (i.e., analyze objective data), and serve better. With all conditions met, focused quality improvements developed in policy for clinical documentation (recordkeeping), discharge planning, and staff competency assessment yield a prospective increase in DD-capability scores for the following COMPASS-EZ domains and agency overall: Program Policies [4.33 to 5.00], Screening and Identification [4.00 to 4.33], Integrated Discharge/Transition Planning [4.00 to 5.00], Program Collaboration and Partnership [4.20 to 5.00], and General Staff Competencies and Training [3.50 to 4.67]; total agency DD-capability score returned a prospective increase of 4.50 to 4.77 [See Figures 1 and 5 in comparison for illustration].

Figure 5: COMPASS-EZ Programmatic Scores Post-QI Implementation

(Results Expected If All Conditions Met)



CHAPTER 6: DISCUSSION OF DUAL-MEASURE EVALUATION

COMPASS-EZ vs. DDCAT Findings

The results of this project provide valuable information about the agency's level of dual diagnosis capability. No COMPASS-EZ domains were found to have met criteria for "Not at all" [1.00-1.99] or "Slightly" [2.00-2.99]; only one domain was found to have met the Likert scale criteria for "Somewhat" [3.00-3.99], indicating the agency boasts at baseline (prior to any future QI actions) a moderate capability in all domains to serve the complex needs of individuals with co-occurring mental health and substance use disorders: General Staff Competencies and Training [see Table 1 for detailed information]. A majority of domains within COMPASS-EZ evaluation met criteria for "Mostly" [4.00-4.99], indicating the program's core provides evidence-based policy, programming, and treatment for persons with co-occurring mental health and substance use disorders, but there exists tangible, earnest opportunity to demonstrate continuous quality improvement toward a more comprehensive co-occurring capability in these areas: Integrated Discharge/Transition Planning; Screening and Identification; Quality Improvement and Data; Program Collaboration and Partnership; Integrated Treatment/Recovery Program Policies; Program Policies; Integrated Treatment/Recovery Programming; Integrated Person-centered Planning; Program Philosophy; and Psychopharmacology. Four domains met criteria for "Completely" [5.00], denoting in these areas a present comprehensive MH/SA treatment integration of highest rating and guidance: Access; Recovery-oriented Integrated Assessment; Integrated Treatment/Recovery Relationships; and Specific Staff Competencies. Renewal House analyzes an overall program COMPASS-EZ score of 4.50 out of 5.00 [see Figure 1 for illustration].

Program evaluation utilizing the DDCAT similarly reveals a range of domain results [see Table 2 for further detail]. No DDCAT domains were found to have met criteria for "Addiction Only Services" (AOS) or its intermediary level (AOS/DDC) [1.00-2.99], indicating the program's dual diagnosis

capabilities evidenced in each domain exceed standard of care commensurate with a population-focus on services principal to persons with unaccompanied substance use disorders. The following domains met criteria for "Dual Diagnosis Capable" (DDC) or its intermediary level (DDC/DDE) [3.00-4.49], indicating program evidence in such domains to show a capable and competent provision of services to persons with co-occurring mental health and substance use disorders although yielding still a greater capacity in the recovery of substance use disorders: Program Milieu; Continuity of Care; Clinical Process: Assessment; Staffing; and Clinical Process: Treatment. Two domains in DDCAT evaluation met criteria for the highest level of MH/SA treatment integration, "Dual Diagnosis Enhanced" (DDE) [4.50-5.00], indicating in these areas a program capacity to address the needs of persons with mental health and substance use disorders, or both, fully and equally: Program Structure and Training. Renewal House analyzes an overall program DDCAT score of 4.04 out of 5.00 [see Figure 2 for illustration].

DDCAT and COMPASS-EZ were not employed for means of comparison, rather dually operated for a concerted effect adding breadth (scale) and depth (penetration) of evaluation. Use of the two tools side-by-side grants distinctive value and motions an understanding of programmatic service gaps and QI actions not fundamentally apparent when in use separately. For example, in this project, DDCAT results alone call attention to the agency's need for (a) on-site staff psychiatrist or physician providing for ready access to medication administration, education, and clinical response; (b) routine availability (on-site or off-site facilitation) of peer and family supports specific to both disorders. Note, successful family support and education is critical to sustained recovery and functioning for the patient with dual diagnosis post-discharge—an indispensable program element in the treatment of co-occurring disorders (Clark, 2001; Drake, O'Neal, & Wallach, 2008). Alternatively, utilization of the COMPASS-EZ measure ensured the following service gaps did not fail to go undetected in evaluation: (a) The program adoption of a formal policies and/or protocols inclusive for *documenting* co-occurring issues, interventions, and outside care collaboration in a single process note, *screening* (i.e., identifying co-occurring nicotine use/dependence, high-risk infectious diseases including Hepatitis C/HIV/TB, and access to primary health care for every client), and *discharge* designed to address continuing care requirements for each disorder;

(b) absence of mental health/substance abuse group programming matched to client stage of change; (c) recovery/resiliency and complexity (co-occurring) competencies added and assessed as part of annual staff performance reviews.

Implications of Findings & Recommendations

DDCAT/COMPASS-EZ findings and forwarded recommendations suggest that across domains of care, community behavioral health agencies can continue to increase critical capabilities for patients with dual diagnosis through policy development. The collective application of one or more independent instruments proves useful to guide and measure the efficacy of quality improvement efforts. Dual evaluation finds the agency at total firmly capable of providing best practice and best care to clients entering treatment with complex, co-occurring mental health and substance use disorders (COMPASS-EZ: 96%, "Somewhat" and above or ≥3; DDCAT: 97%, "Dual Diagnosis Capable" and above or ≥3) [see Figures 3 and 4 for illustration]. Subsequent annual evaluations conducted with one or both of the instruments may be used to measure the developed state of an integrated, concurrent mental health and substance abuse treatment program, comparing index scores before practice change implementation to scores after change implementation. Inadequate and/or absent policy (i.e. protocols and procedures) lowers agency capability to provide an integrated, concurrent delivery of MH/SA treatment. System-level policy development is needed to close the gap between actual and recommended care delivery. Well-written, up-to-date and well-executed policy within a healthcare organization maintains critical importance as the infrastructure for all acts of clinical service and administration, converging to "reduce practice variability that may result in substandard care and patient harm" (Irving, 2014, para.1). This DNP scholarly project labored to combine policy development and implementation to drive critical DD-capacity building within Renewal House.

CHAPTER 7: CONCLUSION

A review of the literature establishes that nothing less than evidence-based practice will do. This project demonstrates that theory-based organizational evaluation and strategic implementation can drive profound integration of a concurrent MH/SA treatment delivery into the routine practice of community-based behavioral health agencies. Attempting to cure the ailment (co-occurring mental health and substance use disorders) without attending to known inadequacies in treatment delivery (i.e., behavioral health settings without dual diagnosis capability) overlooks the essence of health care, and allows for the sustainment of poor outcomes among individuals suffering with dual diagnosis. The literature draws concern to two separate systems of care and inadequate behavioral health program characteristics as barriers to recommended treatment delivery for individuals with dual diagnosis. Assessing agency 'readiness' to deliver an integrated, concurrent mental health and substance abuse treatment is the first step—and arguably the most critical one—toward cultivating a paradigm of optimality in care. Programmatic evaluation tools, DDCAT and COMPASS-EZ, were used effectively as dual measures to assess and guide Renewal House toward increased dual diagnosis capability. Systematic program evaluation and sustainable implementation of agency recommendations forged incredible value, quality, and capabilities to the agency while respecting the limitations of resources and time. Together, with Renewal House's commitment to ongoing quality improvement and the practice change process, the footprints of implementation and outcome from this DNP scholarly project become replicable acts of liberation for individuals suffering with dual diagnosis.

APPENDIX 1: AGENCY CLINICAL RECORDKEEPING POLICY

Renewal House
Documentation Procedures

Goals:

- To ensure that all services are documented with uniform accuracy, reliability, and completion in the client's clinical record in a manner which safeguards the document's security and confidentiality.

- To maintain client records, service documentation, and modifications to client information with integrated attention to co-occurring mental health, health, and substance use concerns.

Procedure:

- Renewal House utilizes an Electronic Health Record (EHR) to document services and maintain an Electronic Clinical Record (ECR) for every client enrolled in programming.
- Every service rendered will be documented; documented services are entered in the corresponding documentation section in the EHR. Documentation should be completed as soon as possible after service provision.
- All documentation—provided by any clinical staff with any level of licensure or training—will include at a minimum: the date of service, client's name, summary of services provided/client response to services, and clinical staff signature.
- If an intern completes documentation, the intern's clinical staff supervisor should co-sign the documentation.
- If a document in the EHR must be addressed for error or inaccuracy, the initial signing staff member will create a dated and signed addendum to the original document explaining the reason for amendment to the document.
- Any necessary documentation that cannot be created electronically will be scanned and uploaded into the EHR into the client's "Document Library". Documents requiring this include, but are not limited to: Insurance cards, forms of identification, certificates of completion, hospital discharge records, etc.
- Clinical records and documentation will be reviewed for compliance and quality assurance quarterly (see "Compliance and Quality Assurance Policy & Procedure" for further details).
- All staff must document any incidents at the time of occurrence on the agency's "Incident Report" form and, if clinically relevant, with a note in the client's ECR.

Assessments/Screenings

- Renewal House conducts various screenings/assessments with clients in order to determine appropriate level of care, relevant service provision and course of treatment, as well as outcomes of service (to include evaluation of client progress towards goals). Based on the client's circumstances, Renewal House may conduct additional screenings/assessments as necessary throughout a client's enrollment in the program.
- All individuals are to be screened in a welcoming and respectful manner for co-occurring mental health issues, substance use issues, or medical issues and for the presentation of immediate risk concerns in each of these areas. Medical assessment to be completed by client's reporting physician and/or primary care manager (PCM).
- The following assessments should be fully completed and signed by the clinical staff member:
    - Initial Intake Screenings for Family Residential Program: Fagerstrom Test for Nicotine Dependence (FTND), Mental Health Screening Form, Suicide Screening & Risk Assessment,

Trauma Screening Questionnaire, and Michigan Alcohol Screening Test (MAST)/Drug Abuse Screening Test (DAST).

- Addiction Severity Index (ASI) – completed during intake and at discharge.
- Adult Adolescent Parenting Inventory (AAPI) – completed with Children's Program staff if necessary.
- ASAM – completed at intake, at discharge, and for continued stay (at least every 14 days) during enrollment in Intensive Outpatient Program (IOP).
- Adult Needs and Strengths Assessment (ANSA) – completed at intake and discharge for Family Residential Program clients.
- Biopsychosocial Assessment – completed during intake session and updated as needed by Case Manager/Therapist.
- Spirituality Assessment – conducted by Spirituality contractor or Case Manager after admission.
- Vocational/Educational Assessment – completed by Case Manager after admission.
- Children's Program Assessment (based on the child's age, and may include): Prenatal Assessment, Child Born at RH Assessment, Preschool Assessment, School-Age Child Assessment, Offsite Child Assessment – conducted by Children's Program staff member after admission.
- Devereux Early Childhood Assessment (DECA)/Devereux Student Strengths Assessment (DESSA)/The Child and Adolescent Needs and Strengths (CANS) – child assessments conducted by Children's Program staff member at admission and at discharge.

Individual Program Plans

- Individual Program Plans (IPP) are completed for every adult client enrolled in the Family Residential Program and Intensive Outpatient Program.
- IPP must be completed in cooperation with the client, be customized to the client's needs/goals, and document a timeframe for completion of goals.
- IPP must be signed by the client, the clinical staff member with whom the plan was written, and the medical director.
- If engaging in Children's Program services, a Parent Action Plan (PAP) will be developed with the mother to identify short-term goals and develop actions steps towards meeting the child's needs. The Parent Action Plan should be updated as the mother progresses through the program.

Ongoing Documentation: Individual and Group Notes

- Individual Progress Note: Individual progress notes should be used whenever a staff meets individually with a client for any session. Ongoing documentation of the client's mental health, health, and substance use issues should be transcribed in a single progress note and in a single client record.
- Individual progress notes should not contain any identifying information about another client.
- When possible, progress notes should reflect any new information or changes to specific goals in the client's IPP and include notation as to the client's progress/lack thereof towards those goals.
- Individual progress notes should avoid opinions and use only factual language. If an interpretive statement is required, staff members should provide support or evidence for the statement.
- Individual progress notes should also document information regarding coordination of care and collaborative service planning with other service providers, including referrals and any additional contacts between RH staff and those service providers (if the appropriate "Release of Information" is signed).

- All groups held at Renewal House must be documented in the client's record if the client attended. Group notes include the following information: service date, title of group, summary of group topic and individual client's response, and staff signature.

Medication Logs

- Staff will document prescription and over-the-counter (OTC) medications in the client's paper medication log as those medications are checked in/out of a client's medication box, as the client requests/takes medication, and/or a as medication supply is completed. These paper logs are kept in a folder in the A-3 office locked medication closet.
- These medication logs will be filed in the closed chart closet and kept in accordance with the agency's Document Retention Policy.

Visitor Logs & Client Sign In/Out Logs

- Visitors to Renewal House Campus should sign in and sign out in the "Visitor Binder" kept in the A-3 Office. These sign in/out sheets will be secured and filed in the closed chart closet and kept in accordance with the agency's "Document Retention" Policy.
- All Family Residential Program clients will sign in/out whenever they leave or return to the A-Building. These sign in/out sheets will be secured and filed in the closed chart closet and kept in accordance with the agency's "Document Retention" Policy.

Effective Date: 11/08/2016

APPENDIX 2: AGENCY CLIENT DISCHARGE PLAN POLICY

Renewal House
Client Discharge Policy

Policy: Discharge planning is an important step serving to fortify recovery gains achieved during the course of treatment. Renewal House makes a dedicated effort to partner with clients to plan and coordinate discharge, and effectively ensures clients know their rights and experience due process when voluntarily or involuntarily departing from services.

Procedure:
Clients review and sign the Client Rights and Responsibilities on the day of admission.
Clients review and sign the Discharge Policy on the day of admission.
Clients receive a signed copy of the Client Rights and Responsibilities and Discharge Policy for their records.
Renewal House staff will review the Discharge Policy again when the Individual Program Plan (IPP) is signed.

In an effort to ensure that discharges are planned appropriately, Renewal House staff:

- Provides clients with weekly reports about their progress towards goals.
- Updates the discharge and aftercare plan with clients to include goals, strategies, strengths, and resources to assist clients in managing their lives and conditions (mental/behavioral health, physical health, spiritual health, financial, housing, child and family) after treatment.

Voluntary discharges are client-initiated discharges. Clients choose to leave Renewal House for a variety of reasons that include but are not limited to:

- Treatment completion and goal attainment;
- Housing has been secured;
- Individual goals/needs have changed;
- Disagreement with treatment or persons.

Involuntary discharges may occur when, after careful consideration, the clinical team determines remaining in the program is detrimental. Before involuntarily discharging a client the clinical team takes into account the following: (a) the length of time a client has been in service; (b) history of progress towards treatment goals; (c) mental illness, trauma history, cognitive functioning, role of medication; (d) client motivation/willingness to take responsibility for care; (e) level of service engagement; and/or (f) staff oversight/error. Reasons for involuntary discharge include but are not limited to:

- Violence/Aggression
- Contraband
    - Illegal Drugs
    - Alcohol
    - Unauthorized medication
    - Weapons
- Other problematic behavior that compromises safety and security, such as:
    - Engaging in illegal activity on or off the campus
    - Verbal or non-verbal threats
    - Property destruction

    - Giving access to unauthorized visitors
    - Inability to follow safety procedures or other rules for safe, health community living
    - Violating confidentiality of other clients
    - Other rule violations
- Client's needs cannot be met, such as:
    - Requires a higher level of care (hospital based, supervised)
    - Requires care that is outside Renewal House's scope of practice
    - Client has reached maximum benefit
    - Client becomes ineligible for services at Renewal House
- Legal Issues
- Client is absent from the program:
    - More than 3 service dates for outpatient services
    - More than 24 hours for Family Residential Program

Renewal House makes every reasonable effort to avoid discharging clients involuntarily but recognizes there are times when continuing to maintain a client in programming is detrimental to the client and/or other clients.

Renewal House further makes every reasonable effort to plan each client discharge but may have to involuntarily discharge clients immediately depending on the level of threat/risk present at the time.

Upon discharge, clients will receive documentation of program services received, progress towards treatment goals/accomplishments, and specific stage-matched recommendations for each co-occurring issue (to include plan for continued integration of mental health and substance abuse care with a prospective provider or clinical team).

Renewal House will notify referral sources and other collaborating providers with whom the client has been engaged of her departure from services. Renewal House will provide detailed information about the discharge and aftercare plan only when a signed, dated, and active release of information is present in the Electronic Health Record (EHR).

Discharged clients are eligible to reapply for admission.

Family Residential Program Discharges

Renewal House acts to thwart client risk for homelessness and assists clients prior to discharge in locating housing, connecting the client to supportive community resources and referrals.

Regardless of voluntary or involuntary discharge, all Family Residential Program clients are provided with a written notice of discharge that outlines reasons for discharge and due process.

Clients who are involuntarily discharged from the Family Residential Program may appeal a discharge within 3 business days of the date shown on the written "Discharge Notice to Clients". Appeals may be submitted in oral or written form to the Chair of the Renewal House Program Committee.

The discharging staff member will complete an Incident Report on all clients discharging from the Family Residential Program with the exception of clients discharged on a voluntary basis due to treatment completion and goal attainment.

Clients discharged from the Family Residential Program are provided 72 hours from the time of departure to retrieve belongings. The retrieval must be scheduled through a case manager or the case manager's designee.

Applicable Forms:

Client Rights and Responsibilities
Discharge Policy for Clients
Discharge Notice to Clients
Discharge and Aftercare Plan (EHR)
Individual Program Plan
Release of Information
Incident Report

Effective Date: 7/19/2016

APPENDIX 3: STAFF PERFORMANCE/COMPENTENCY ASSESSMENT POLICY

Renewal House
Annual Evaluation and Credentialing

Goal

- To ensure employee job performance is evaluated annually.
- To provide a fair process in supervision for all employees via a uniform format encouraging both mentorship and professional growth.
- To provide a regular opportunity for the staff to evaluate the agency's benefits and operation.
- To ensure all Renewal House professional staff credentials remain current and documented.

Agency Evaluation

An electronic survey using a web-based tool (such as Survey Monkey) will be shared with all staff no less than once every three years. Staff will complete the survey using the e-mail link provided. The responses will be compiled and reviewed by the CEO and Board of Directors. The CEO and/or board president will share and discuss the results with the staff during a designated meeting time.

Staff Evaluation

A full evaluation of each staff member will take place once each fiscal year. The evaluation process will consist of the following documents:

- **Employee Goals Summary Form** – the employee and supervisor work together to establish goals at the beginning of the review period. The goals should be specific actions or tasks that build on the employee's key responsibilities. They will be reviewed by the employee and supervisor mid-period and as part of the final evaluation.
- **Competencies Assessment** – the employee and the supervisor each complete a competencies assessment to rate the employee in ten areas. The employee and supervisor will compare the ratings and discuss any differences.

Evaluation & Goal Setting Meeting

The supervisor will meet with the employee to share, discuss, and sign the written documents listed above. The job description should also be reviewed and signed. If updates to the job description are needed, the supervisor will forward the request to Human Resources for review. The Employee Goals Summary Form will be completed during this meeting.

The completed and signed packet of forms and job description are forwarded to the CEO for review. After review, the CEO forwards the packet to Human Resources for filing in the employee's personnel file.

Professional Credentialing Annual Review

The credentials of licensed and professional staff, contractors, and volunteers will be verified at the following sites upon hire and as part of the annual evaluation process.

Staff, contractors and volunteers holding a professional license will be verified through the TN Department of Health State Licensure Board at https://apps.health.tn.gov/licensure/.

Malpractice claim history for licensed staff, contractors and volunteers will be verified through the National Practitioner Data Bank at www.npdb-hipdb.com.

All clinical (direct-service) staff will be checked for Medicare, Medicaid and all other Federal health care program sanctions through the Office of Inspector General at https://exclusions.oig.hhs.gov/

Annual Compliance Check
Department of Children's Services (DCS) Policy 4.1 requires the annual check of staff that are paid under a DCS grant. The following sites will be checked for any Renewal House staff whose salary is in part or in full allocated to the DCS grant.

- TN Bureau of Investigation Drug Offender Registry Database at https://apps.tn.gov/methor-app/search
- TN Felony Offender Information at https://apps.tn.gov/foil-app/search.jsp
- U.S. Department of Justice National Sex Offender Registry at https://www.nsopw.gov/
- TN Department of Health Abuse Registry at https://apps.health.tn.gov/AbuseRegistry/default.aspx
- DCS Child Welfare Information System Database at https://www.tn.gov/assets/entities/dcs/attachments/0741.doc (this requires Renewal House Authorization for Disclosure of Employee Information form and a DCS Database Search Results form to be completed for each staff person being reviewed. Completed Database Search Results forms should be submitted to *el-dcs-provider.backgroundcheck@tn.gov*.)

Fingerprinting
Any staff member who is paid under the Department of Children's Services grant must be fingerprinted upon hire or at the time their salary is allocated to the grant.

Motor Vehicle Report (MVR)
Any staff member whose role and responsibilities include regular driving of agency van(s) must have a MVR check completed annually. The results are reviewed by Human Resources to verify the F-endorsement is still active and to determine if there have been any traffic violations or accidents.

Effective Date: 10/1/2016

Renewal House
Performance Evaluation
Competencies Assessment

Name of Employee: _____

Title of Employee: _____

Assessment Completed By: _____

Date of Evaluation: _____

Period Evaluated: _____

This assessment is completed as part of the annual Staff Evaluation process. It is to be completed at the end of the annual review period.
For each competency, please:

- **Mark the number that best reflects the skill level the employee demonstrates in this competency.**
- **Use the space provided to list specific examples that support your rating.**

Knowledge

Delivers agency responsibilities in congruence with best practice (interventions, processes, or administration) supporting the successful recovery and resiliency of clients with single and/or complex co-occurring disorders.

Demonstrated Skill Level		
Unsatisfactory	Needs Improvement	Competent

Comments - (Include specific examples for the rating. If the employee has gone above and beyond a rating of competent, include examples here.)

Judgment

Demonstrates the capacity to make sound decisions.

Demonstrated Skill Level		
Unsatisfactory	Needs Improvement	Competent

Comments - (Include specific examples for the rating. If the employee has gone above and beyond a rating of competent, include examples here.)

Professionalism/ Boundaries

Possesses knowledge of professional ethics/boundaries, and applies these principles to the work setting.

Demonstrated Skill Level		
Unsatisfactory	Needs Improvement	Competent

Comments - (Include specific examples for the rating. If the employee has gone above and beyond a rating of competent, include examples here.)

Interpersonal Skills

Demonstrates respect for others, strong communication skills and the ability to listen.

Demonstrated Skill Level		
Unsatisfactory	Needs Improvement	Competent

Comments - (Include specific examples for the rating. If the employee has gone above and beyond a rating of competent, include examples here.)

Cooperation

Operates effectively as a "team member" and demonstrates flexibility.

Demonstrated Skill Level		
Unsatisfactory	Needs Improvement	Competent

Comments - (Include specific examples for the rating. If the employee has gone above and beyond a rating of competent, include examples here.)

Innovation

Uses imagination and creativity in the job, quickly understanding and assessing new information and situations.

Demonstrated Skill Level		
Unsatisfactory	Needs Improvement	Competent

Comments - (Include specific examples for the rating. If the employee has gone above and beyond a rating of competent, include examples here.)

Organizational Skills

Demonstrates accuracy and is able to prioritize and use time efficiently.

Demonstrated Skill Level		
Unsatisfactory	Needs Improvement	Competent

Comments - (Include specific examples for the rating. If the employee has gone above and beyond a rating of competent, include examples here.)

Initiative

Volunteers for non-routine tasks, is self-motivated and proactive in assessing problems and asserting solutions.

Demonstrated Skill Level		
Unsatisfactory	Needs Improvement	Competent

Comments - (Include specific examples for the rating. If the employee has gone above and beyond a rating of competent, include examples here.)

Agency Code of Conduct

All Renewal House employees are to conduct themselves at all times according to the Agency Code of Conduct. Please evaluate job performance in these areas:

To maintain a professional attitude which supports the integrity and reputation of Renewal House.

Compliance	
Noncompliant	Compliant

Comments:

To provide the same professional services to all clients regardless of race, color, religion, sex, national origin, age, sexual orientation or disability.

Compliance	
Noncompliant	Compliant

Comments:

To respect the dignity of clients and to hold in confidence all information obtained in the course of service at Renewal House.

Compliance	
Noncompliant	Compliant

Comments:

To respect the rights and views of colleagues and to treat them with courtesy and fairness.

Compliance	
Noncompliant	Compliant

Comments:

To use the resources of Renewal House only for the purposes for which they are intended.

Compliance	
Noncompliant	Compliant

Comments:

_____ _____

Signature of person completing this form Date

_____ _____

Signature of person reviewing this form Date

NOTE:

- Both supervisor and employee must complete a Competencies Assessment form.
- Both Competencies Assessments must be placed in the personnel file.
- Both Competencies Assessments must be signed by both parties.

Mid-Year Review
Employee Initials & Date:
Supervisor Initials & Date:

Date of Final Evaluation
Employee Initials & Date:
Supervisor Initials & Date

Renewal House
Employee Goals Summary Form

Employee: _____ **Review Period:** _____

Goals should be established at the beginning of the review period. They will be reviewed by both the employee and the supervisor mid-period and as part of the final evaluation. Goals are specific actions or tasks that build on the employee's key responsibilities. Ideally each employee should have 1-2 goals related to growth development. Goals should have precise desired outcomes that are realistic, achievable and measurable.

Goals should adhere to the SMART acronym:

S – Specific – Clearly stated using terminology both the employee and supervisor understand.

M – Measurable – Contains concrete criteria by which to determine progress toward and/or completion of a set goal.

A – Attainable – Goal should be challenging, but within control of the employee and aligned with role(s) and responsibilities.

R – Realistic/Relevant – Related to the vocational position, the development of the employee and/or the agency's strategic plan.

T – Time bound – Should contain target dates, deadlines or due dates. Goals may be carried over to another performance cycle, but should not be indefinite.

GOALS	**Type of Goal**[1]	**Target & Actual Completion Dates**	**Mid-Period Progress Note** **Date:**	**Final Evaluation Note** **Date:**
1. Measure:				
2. Measure:				
3. Measure:				

[1] Type of Goals: KR = Key Responsibility or GD = Growth Development

4. Measure:				
5. Measure:				

Employee Signature_____

Date Goals Established _____

Supervisor Signature_____

Date Goals Established _____

REFERENCES

Abram, K. M., & Teplin, L. A. (1991). Co-occurring disorders among mentally ill jail detainees: Implications for public policy. *American Psychologist*, *46*(10), 1036-1045. Retrieved from http://vb3lk7eb4t.search.serialssolutions.com.libproxy.lib.unc.edu/?sid=Entrez:PubMed&id=pmid:1746771

Adachi, W., & Lodolce, A. E. (2005). Use of failure mode and effects analysis in improving the safety of I.V. drug administration. *American Journal of Health-System Pharmacy, 62*(9), 917-920. Retrieved from https://auth-lib-unc-edu.libproxy.lib.unc.edu/ezproxy_auth.php?url=http://search.ebscohost.com.libproxy.lib.unc.edu/login.aspx?direct=true&db=rzh&AN=106383248&site=ehost-live&scope=site

Alexander, M. J. (1996). Women with co-occurring addictive and mental disorders: An emerging profile of vulnerability. *American Journal of Orthopsychiatry, 66*(1), 61-70. Retrieved from http://aia.berkeley.edu/media/pdf/dual_dx_2005.pdf

American Association of Colleges of Nursing [AACN]. (2006). Essentials of doctoral education for advanced nursing practice. Retrieved from http://www.aacn.nche.edu/dnp/Essentials.pdf

Amerigroup Community Care. (2016). *Provider manual*. Retrieved from https://providers.amerigroup.com/ProviderDocuments/TNTN_CAID_Prov_Man.pdf

Baillargeon, J., Binswanger, I. A., Penn, J. V., Williams, B. A., & Murray, O. J. (2009). Psychiatric disorders and repeat incarcerations: The revolving prison door. *American Journal of Psychiatry*, *166*(1), 103-109. Retrieved from http://www.antoniocasella.eu/archipsy/Baillargeon_revolving_2009.PDF

Barrowclough, C., Haddock, G., Tarrier, N., Lewis, S. W., Moring, J., O'Brien, R., . . . McGovern, J. (2001). Randomized controlled trial of motivational interviewing, cognitive behavior therapy, and family intervention for patients with comorbid schizophrenia and substance use disorders. *American Journal of Psychiatry, 158*(10), 1706–1713. Retrieved from http://vb3lk7eb4t.search.serialssolutions.com.libproxy.lib.unc.edu/?sid=Entrez:PubMed&id=pmid:11579006

BlueCross BlueShield of Tennessee. (2016). *Provider administration manual*. Retrieved from http://www.bcbst.com/docs/providers/manuals/BCT_PAM.pdf

Boswell, R. A. (2011). A physician group's movement toward electronic health records: A case study using the transtheoretical model for organizational change. *Consulting Psychology Journal: Practice & Research, 63*(2), 138-148. doi:10.1037/a0024319

Brunette, M. F., & Drake, R. E. (1997). Gender differences in patients with schizophrenia and substance abuse. *Comprehensive Psychiatry, 38*(2), 109–116. doi:10.1016/S0010-440X(97)90090-0

Brunette, M., Mueser, K., & Drake, R. (2004). A review of research on residential programs for people with severe mental illness and co-occurring substance use disorders. *Drug and Alcohol Review, 23*(4), 471-481. Retrieved from http://www.dartmouth.edu/~dcare/pdfs/fp/DrakeRobert-AReviewOfResearch.pdf

Burnam, M. A., & Watkins, K. E. (2006). Substance abuse with mental disorders: specialized public

systems and integrated care. *Health Affairs, 25*(3), 648-658. Retrieved from http://content.healthaffairs.org.libproxy.lib.unc.edu/content/25/3/648.full.pdf+html

Carmichael, D., Tackett-Gibson, M., & Dell, O. (1998). *Texas dual diagnosis project evaluation report, 1997–1998*. College Station, TX: Texas A&M University Public Policy Research Institute.

Caton, C. L., Shrout, P. E., Eagle, P. F., Opler, L. A., Felix, A., & Dominguez, B. (1994). Risk factors for homelessness among schizophrenic men: A case-control study. *American Journal of Public Health, 84*(2), 265-270. Retrieved from http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1615013/pdf/amjph00453-0107.pdf

Centers for Disease Control and Prevention [CDC] (Program Performance and Evaluation Office). (2012). *Introduction to program evaluation for public health programs: A self-study guide.* Retrieved from http://www.cdc.gov/eval/guide/introduction/

Chaple, M., & Sacks, S. (2014). The impact of technical assistance and implementation support on program capacity to deliver integrated services. *The Journal of Behavioral Health Services & Research*, 1-15. Retrieved from http://vb3lk7eb4t.search.serialssolutions.com.libproxy.lib.unc.edu/?sid=Entrez:PubMed&id=pmid:24928534

Clark, R. E. (2001). Family support and substance use outcomes for persons with mental illness and substance use disorders. *Schizophrenia Bulletin*, *27*(1), 93-101.

Clark, R. E., Teague, G. B., Ricketts, S. K., Bush, P. W., Xie, H., McGuire, T. G., . . . Zubkoff, M. (1998). Cost-effectiveness of assertive community treatment versus standard case management for persons with co-occurring severe mental illness and substance use disorders. *Health Services Research, 33*(5), 1285-1308. Retrieved from http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1070317/pdf/hsresearch00030-0111.pdf

Craig, T. K., Sonia Johnson, D. M., Psych, M. R. C., McCrone, P., Afuwape, S., Hughes, E., ... & Thornicroft, G. (2008). Integrated care for co-occurring disorders: psychiatric symptoms, social functioning, and service costs at 18 months. *Psychiatric Services, 59*(3), 276-282. Retrieved from http://ps.psychiatryonline.org/doi/10.1176/ps.2008.59.3.276

Cuffel, B. J., Shumway, M., Chouljian, T. L., & Macdonald, T. (1994). A longitudinal study of substance use and community violence in schizophrenia. *Journal of Nervous and Mental Disease, 182*(12), 704-708. Retrieved from http://vb3lk7eb4t.search.serialssolutions.com.libproxy.lib.unc.edu/?sid=Entrez:PubMed&id=pmid:7989915

Cunningham, C. E., Woodward, C. A., Shannon, H. S., MacIntosh, J., Lendrum, B., Rosenbloom, D., & Brown, J. (2002). Readiness for organizational change: A longitudinal study of workplace, psychological and behavioural correlates. *Journal of Occupational and Organizational Psychology, 75*(4), 377-392.

Daniels, L. M., Barreto, J. N., Kuth, J. C., Anderson, J. R., Zhang, B., Majka, A. J., . . . Tosh, P. K. (2015). Failure mode and effects analysis to reduce risk of anticoagulation levels above the target range during concurrent antimicrobial therapy. *American Journal of Health-System Pharmacy, 72*(14), 1195-1203. doi:10.2146/ajhp140632

DiClemente, C. C, & Prochaska, J. O. (1982). Self-change and therapy change of smoking behavior: A comparison of processes of change in cessation and maintenance. *Addictive Behaviors*, *7*, 133-142.

DiClemente, C. C., & Prochaska, J. O. (1998). Toward a comprehensive, transtheoretical model of change: Stages of change and addictive behaviors. In W. R. Miller & N. Heather (Eds.), *Treating addictive behaviors* (2nd ed., pp. 3-24). New York, NY: Plenum Press.

Domino, M., Morrissey, J. P., Nadlicki-Patterson, T., & Chung, S. (2005). Service costs for women with co-occurring disorders and trauma. *Journal of Substance Abuse Treatment, 28*(2), 135-143. Retrieved from http://www.seekingstrength.org/7-11-03%20arts/2005%20domino%20wcdvs%20cost.pdf

Drake, R. E., & Bond, G. R. (2010). Implementing integrated mental health and substance abuse services. *Journal of Dual Diagnosis, 6*(3), 251-262. doi:10.1080/15504263.2010.540772

Drake, R. E., Essock, S. M., Shaner, A., Carey, K. B., Minkoff, K., Kola, L., . . . Lynde, D. (2001). Implementing dual diagnosis services for clients with severe mental illness. *Psych Services, 52*(4), 469-476. Retrieved from http://davemsw.com/blog/recovery/MICD%20Implementing.pdf

Drake, R. E., Mercer-McFadden, C., Mueser, K. T., McHugo, Q. J., & Bond, Q. R. (1998). Review of integrated mental health and substance abuse treatment for patients with dual diagnosis. *Integrated Mental Health and Substance Abuse*, *24*(4), 589-605. Retrieved from http://schizophreniabulletin.oxfordjournals.org.libproxy.lib.unc.edu/content/24/4/589.full.pdf

Drake, R. E., Mueser, K. T., Clark, R. E., & Wallach, M. A. (1996). The course, treatment, and outcome of substance disorder in persons with severe mental illness. *American Journal of Orthopsychiatry, 66*(1), 42-51. doi:10.1037/h0080153

Drake, R. E., O'Neal, E. L., & Wallach, M. A. (2008). A systematic review of psychosocial research on psychosocial interventions for people with co-occurring severe mental and substance use disorders. *Journal of Substance Abuse Treatment, 34*(1), 123-138. Retrieved from http://dx.doi.org.libproxy.lib.unc.edu/10.1016/j.jsat.2007.01.011

Drake, R. E., & Wallach, M. A. (1989). Substance abuse among the chronic mentally ill. *Hospital & Community Psychiatry, 40*(10), 1041-1046.

Finnell, D. S. (2003). Use of the transtheoretical model for individuals with co-occurring disorders. *Community Mental Health Journal, 39*(1), 3-15. Retrieved from https://auth-lib-unc.edu.libproxy.lib.unc.edu/ezproxy_auth.php?url=http://search.ebscohost.com.libproxy.lib.unc.edu/login.aspx?direct=true&db=rzh&AN=2004056958&site=ehost-live&scope=site

French, M. T., McCollister, K. E., Sacks, S., McKendrick, K., & De Leon, G. (2002). Benefit–cost analysis of a modified therapeutic community for mentally ill chemical abusers. *Evaluation and Program Planning, 25*(2), 137-148. Retrieved from http://ehp.sagepub.com.libproxy.lib.unc.edu/content/22/1/60.full.pdf+html

French, M. T., Sacks, S., De Leon, G., Staines, G., & McKendrick, K. (1999). Modified therapeutic community for mentally ill chemical abusers: Outcomes and costs. *Evaluation of Health Professions, 22*(1), 60-85. doi:10.1177/016327879902200104

Goodman, L. A., Rosenberg, S. D., Mueser, K. T., & Drake, R. E. (1997). Physical and sexual assault history in women with serious mental illness: Prevalence, correlates, treatment, and future research directions. *Schizophrenia Bulletin, 23*(4), 685-696. Retrieved from http://schizophreniabulletin.oxfordjournals.org.libproxy.lib.unc.edu/content/23/4/685.full.pdf+html

Gotham, H. J., Brown, J. L., Comaty, J. E., McGovern, M. P., & Claus, R. E. (2013). Assessing the co-occurring capability of mental health treatment programs: The dual diagnosis capability in mental health treatment (DDCMHT) index. *The Journal of Behavioral Health Services & Research, 40*(2), 234-241. Retrieved from http://vb3lk7eb4t.search.serialssolutions.com.libproxy.lib.unc.edu/?sid=Entrez:PubMed&id=pmid:23334656

Gotham, H. J., Claus, R. E., Selig, K., & Homer, A. L. (2010). Increasing program capability to provide treatment for co-occurring substance use and mental disorders: Organizational characteristics. Journal of *Substance Abuse Treatment, 38*(2), 160–169. Retrieved from http://vb3lk7eb4t.search.serialssolutions.com.libproxy.lib.unc.edu/?sid=Entrez:PubMed&id=pmid:19717273

Grant, B. F., Stinson, F. S., Dawson, D. A., Chou, S. P., Dufour, M. C., Compton, W., Pickering, R. P., Kaplan, K. (2004). Prevalence and co-occurrence of substance use disorders and independent mood and anxiety disorders: Results from the National Epidemiologic Survey on Alcohol and Related Conditions. *Arch Gen Psychiatry, 61*(8), 807-816. doi:10.1001/archpsyc.61.8.807

Grella, C. E., & Stein, J. A. (2006). Impact of program services on treatment outcomes of patients with comorbid mental and substance use disorders. *Psychiatric Services, 57*(7), 1007-1015. doi: 10.1176/ps.2006.57.7.1007

Haddock, G., Barrowclough, C., Tarrier, N., Moring, J., O'Brien, R., Schofield, N., . . . Lewis, S. (2003). Cognitive-behavioural therapy and motivational intervention for schizophrenia and substance misuse: 18-month outcomes of a randomised controlled trial. *The British Journal of Psychiatry: The Journal of Mental Science, 183*, 418-426. Retrieved from http://c.ymcdn.com/sites/www.marrch.org/resource/resmgr/imported/01-05-Article_-_Radomized_Controlled.pdf

Haywood, T. W., Kravitz, H. M., Grossman, L. S., & Cavanaugh, J. L. (1995). Predicting the "revolving door" phenomenon among patients with schizophrenic, schizoaffective, and affective disorders. The *American Journal of Psychiatry, 152*(6), 856-861. Retrieved from http://vb3lk7eb4t.search.serialssolutions.com.libproxy.lib.unc.edu/?sid=Entrez:PubMed&id=pmid:7755114

Health Resources and Services Administration [HRSA]. (2011). *Quality improvement (QI) and the importance of QI.* Retrieved from http://www.hrsa.gov/quality/toolbox/methodology/qualityimprovement/

Hellerstein, D. J., Rosenthal, R. N., & Miner, C. R. (1995). A prospective study of integrated outpatient treatment for substance-abusing schizophrenic patients. *The American Journal on Addictions, 4*(1), 33-42. Retrieved from http://www.researchgate.net/profile/David_Hellerstein2/publication/229514788_A_Prospective_

Study_of_Integrated_Outpatient_Treatment_for_SubstanceAbusing_Schizophrenic_Patients/links/02e7e53398d3987f51000000.pdf

Hunt, G. E., Bergen, J., & Bashir, M. (2002). Medication compliance and comorbid substance abuse in schizophrenia: Impact on community survival 4 years after a relapse. *Schizophrenia Research*, *54*(3), 253-264. Retrieved from http://www.sciencedirect.com.libproxy.lib.unc.edu/science/article/pii/S0920996401002614

Hyde, P. S. (2004). State mental health policy: A unique approach to designing a comprehensive behavioral health system in New Mexico. *Psychiatric Services, 55*(9), 983-985. Retrieved from http://ps.psychiatryonline.org/doi/pdf/10.1176/appi.ps.55.9.983

Institute for Healthcare Improvement [IHI]. (2016). *The IHI triple aim initiative.* Retrieved from http://www.ihi.org/engage/initiatives/TripleAim/Pages/default.aspx

Institute of Medicine (IOM). (2006). Quality chasm series: Improving the quality of healthcare for mental and substance use conditions. Washington, DC: National Academies Press. Retrieved from http://www.ncbi.nlm.nih.gov/books/NBK19830/pdf/Bookshelf_NBK19830.pdf

Irving, A. (2014, October 13). Policies and procedures for healthcare organizations: A risk management perspective. *Patient Safety & Quality Healthcare*. Retrieved from http://www.psqh.com/analysis/policies-and-procedures-for-healthcare-organizations-a-risk-management-perspective/#

Jerrell, J. M., Hu, T. W., & Ridgely, M. S. (1994). Cost-effectiveness of substance disorder interventions for people with severe mental illness. *The Journal of Mental Health Administration, 21*(3), 283-297.

Kozakiewicz, J. M., Benis, L. J., Fisher, S. M., & Marseglia, J. B. (2005). Safe chemotherapy administration: Using failure mode and effects analysis in computerized prescriber order entry. *American Journal of Health-System Pharmacy, 62*(17), 1813-1816. doi:10.2146/ajhp040553

Kraft, M. K., Rothbard, A. B., Hadley, T. R., McLellan, A. T., & Asch, D. A. (1997). Are supplementary services provided during methadone maintenance really cost-effective? *The American Journal of Psychiatry, 154*(9), 1214-1219. Retrieved from http://vb3lk7eb4t.search.serialssolutions.com.libproxy.lib.unc.edu/?sid=Entrez:PubMed&id=pmid:9286179

Lambert-Harris, C., Saunders, E. C., McGovern, M. P., & Xie, H. (2013). Organizational capacity to address co-occurring substance use and psychiatric disorders: Assessing variation by level of care. *Journal of Addiction Medicine, 7*(1), 25-32. Retrieved from http://vb3lk7eb4t.search.serialssolutions.com.libproxy.lib.unc.edu/?sid=Entrez:PubMed&id=pmid:23188042

Lee, N., & Cameron, J. (2009). Differences in self and independent ratings on an organisational dual diagnosis capacity measure. *Drug and Alcohol Review, 28*(6), 682-684. Retrieved from http://onlinelibrary.wiley.com.libproxy.lib.unc.edu/doi/10.1111/j.1465-3362.2009.00116.x/epdf

Levesque, D. A., Prochaska, J. M., & Prochaska, J. O. (1999). Stages of change and integrated service delivery. *Consulting Psychology Journal: Practice and Research, 51*(4), 226-241.

Levesque, D. A., Prochaska, J. M., Prochaska, J. O., Dewart, S. R., Hamby, L. S., & Weeks, W. B. (2001). Organizational stages and processes of change for continuous quality improvement in health care. *Consulting Psychology Journal: Practice and Research, 53*(3), 139-153. doi:10.1037/1061-4087.53.3.139

Mangrum, L. F., Spence, R. T., & Lopez, M. (2006). Integrated versus parallel treatment of co-occurring psychiatric and substance use disorders. *Journal of Substance Abuse Treatment, 30*(1), 79-84. Retrieved from http://vb3lk7eb4t.search.serialssolutions.com.libproxy.lib.unc.edu/?sid=Entrez:PubMed&id=pmid:16377455

Matthews, H., Kelly, P. J., & Deane, F. P. (2011). The dual diagnosis capability of residential addiction treatment centres: Priorities and confidence to improve capability following a review process. *Drug and Alcohol Review*, *30*(2), 195-199. Retrieved from http://vb3lk7eb4t.search.serialssolutions.com.libproxy.lib.unc.edu/?sid=Entrez:PubMed&id=pmid:23317513

McGovern, M. P., Lambert-Harris, C., Gotham, H. J., Claus, R. E., & Xie, H. (2014). Dual diagnosis capability in mental health and addiction treatment services: An assessment of programs across multiple state systems. *Administration and Policy in Mental Health and Mental Health Services Research, 41*(2), 205-214. Retrieved from http://vb3lk7eb4t.search.serialssolutions.com.libproxy.lib.unc.edu/?sid=Entrez:PubMed&id=pmid:23183873

McGovern, M. P., Lambert-Harris, C., McHugo, G. J., Giard, J., & Mangrum, L. (2010). Improving the dual diagnosis capability of addiction and mental health treatment services: Implementation factors associated with program level changes. *Journal of Dual Diagnosis*, *6*(3-4), 237-250. doi:10.1080/15504263.2010.537221

McGovern, M. P., Matzkin, A. L., & Giard, J. (2007). Assessing the dual diagnosis capability of addiction treatment services: The Dual Diagnosis Capability in Addiction Treatment (DDCAT) Index. *Journal of Dual Diagnosis*, *3*(2), 111-123.

McGovern, M. P., Xie, H., Segal, S. R., Siembab, L., & Drake, R. E. (2006). Addiction treatment services and co-occurring disorders: Prevalence estimates, treatment practices, and barriers. *Journal of Substance Abuse Treatment, 31*(3), 267-275. Retrieved from http://www.sciencedirect.com.libproxy.lib.unc.edu/science/article/pii/S0740547206001437

McNally, K. M., Page, M. A., & Sunderland, V. B. (1997). Failure-mode and effects analysis in improving a drug distribution system. *American Journal of Health-System Pharmacy, 54*(2), 171-177. Retrieved from https://auth-lib-unc-edu.libproxy.lib.unc.edu/ezproxy_auth.php?url=http://search.ebscohost.com.libproxy.lib.unc.edu/login.aspx?direct=true&db=rzh&AN=105819354&site=ehost-live&scope=site

Moher, D., Liberati, A., Tetzlaff, J., Altman, D. G., & the PRISMA Group. (2009). Preferred reporting items for systematic reviews and meta-analyses: The PRISMA statement. *PLoS Med, 6*(6): e1000097. doi:10.1371/journal.pmed1000097

Mueser, K. T. (2003). *Integrated treatment for dual disorders: A guide to effective practice*. New York, NY: Guilford Press. Retrieved from http://spers.ca/wp-content/uploads/2013/08/Practice-guide-for-dual-disorders.pdf

Mueser, K. T., Goodman, L. B., Trumbetta, S. L., Rosenberg, S. D., Osher, F. C., Vidaver, R., . . . Foy, D. W. (1998). Trauma and posttraumatic stress disorder in severe mental illness. Journal of *Consulting and Clinical Psychology, 66*(3), 493-499. doi:10.1037/0022-006X.66.3.493

New Freedom Commission on Mental Health. (2003). *Achieving the promise: Transforming mental health care in America*. Rockville, MD: Department of Health and Human Services. Retrieved from http://govinfo.library.unt.edu/mentalhealthcommission/reports/FinalReport/downloads/FinalReport.pdf

New Mexico Behavioral Health Collaborative. (2013, November). *New Mexico behavioral health consumer, family/caregiver project survey.* Retrieved from http://www.bhc.state.nm.us/pdf/FINAL%202013%20Adult%20Family%20Caregiver%20Report%20final%20as%20of%2011%2021.%2013.pdf

Osher, F. C., & Drake, R. E. (1996). Reversing a history of unmet needs: Approaches to care for persons with co-occurring addictive and mental disorders. *American Journal of Orthopsychiatry, 66*(1), 4-11. doi:10.1037/h0080149

Padwa, H., Guerrero, E. G., Braslow, J. T., & Fenwick, K. M. (2015). Barriers to serving clients with co-occurring disorders in a transformed mental health system. *Psychiatric Services, 66*(5), 547-550. Retrieved from http://dx.doi.org.libproxy.lib.unc.edu/10.1176/appi.ps.201400190

Padwa, H., Larkins, S., Crevecoeur-MacPhail, D. A., & Grella, C. E. (2013). Dual diagnosis capability in mental health and substance use disorder treatment programs. *Journal of Dual Diagnosis*, *9*(2), 179-186. Retrieved from http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3655772/

Prochaska, J. M. (2000). A transtheoretical model for assessing organizational change: A study of family service agencies' movement to time limited therapy. *Families in Society, 81*(1), 76–84.

Prochaska, J. M., Mauriello, L., Sherman, K., Harlow, L., Silver, B., & Trubatch, J. (2006). Assessing readiness for advancing women scientists using the transtheoretical model. *Sex Roles, 54*(11), 869–880.

Prochaska. J. O., DiClemente, C. D., & Norcross, J. C. (1992). In search of how people change: Application to addictive behaviors. *American Psychologist*, *41*, 1102-1114.

Prochaska, J. O., DiClemente, C. C., Velicer, W. F., & Rossi, J. S. (1993). Standardized, individualized, interactive, and personalized self-help programs for smoking cessation. *Health Psychology*, *12*(5), 399. Retrieved from ftp://190.25.233.21/DOCUMENTOS/Latitude/PDF/HP/1993%285%29%28399-405%29.pdf

Prochaska, J. O., & Velicer, W. F. (1997). The transtheoretical model of health behavior change. *American Journal of Health Promotion, 12*(1), 38-48. Retrieved from https://auth-lib unc-edu.libproxy.lib.unc.edu/ezproxy_auth.php?url=http://search.ebscohost.com.libproxy.lib.unc.edu/login.aspx?direct=true&db=rzh&AN=1998073200&site=ehost-live&scope=site

Prochaska, J. O., Velicer, W. F., DiClemente, C. C., & Fava, J. (1988). Measuring processes of change: Applications to the cessation of smoking. *Journal of Consulting Clinical Psychology, 56*(4), 520-528. doi: 10.1037/0022-006X.56.4.520

Rakowski, W., Ehrich, B., Goldstein, M. G., Rimer, B. K., Pearlman, D. N., Clark, M. A., ... & Woolverton, H. (1998). Increasing mammography among women aged 40–74 by use of a stage-matched, tailored intervention. *Preventive medicine*, *27*(5), 748-756. Retrieved from http://www.researchgate.net/profile/Wayne_Velicer/publication/222349618_Increasing_Mammography_among_Women_Aged_4074_by_Use_of_a_Stage-Matched_Tailored_Intervention/links/02e7e51d3080e3fd58000000.pdf

Renewal House. (2013a). *About us.* Retrieved from http://www.renewalhouse.org/custpage.cfm/frm/153240/sec_id/153240

Renewal House. (2013b). *Mission and values.* Retrieved from http://www.renewalhouse.org/About_Us/Mission_and_Values/

Renewal House. (2013c). *Our programs*. Retrieved from http://www.renewalhouse.org/Our_Programs/

Ridgely, M. S., Goldman, H. H., & Willenbring, M. (1990). Barriers to the care of persons with dual diagnoses: Organizational and financing issues. *Schizophrenia Bulletin, 16*(1), 123-132. Retrieved from http://schizophreniabulletin.oxfordjournals.org/content/16/1/123.full.pdf+html

Rosenberg, S. D., Goodman, L. A., Osher, F. C., Swartz, M. S., Essock, S. M., Butterfield, M. I., . . . Salyers, M. P. (2001). Prevalence of HIV, hepatitis B, and hepatitis C in people with severe mental illness. *American Journal of Public Health, 91*(1), 31-37. Retrieved from http://vb3lk7eb4t.search.serialssolutions.com.libproxy.lib.unc.edu/?sid=Entrez:PubMed&id=pmid:11189820

Sacks, S., Chaple, M., Sirikantraporn, J., Sacks, J. Y., Knickman, J., & Martinez, J. (2013). Improving the capability to provide integrated mental health and substance abuse services in a state system of outpatient care. *Journal of Substance Abuse Treatment, 44*(5), 488-493. Retrieved from http://vb3lk7eb4t.search.serialssolutions.com.libproxy.lib.unc.edu/?sid=Entrez:PubMed&id=pmid:23317513

Sacks, S., Sacks, J. Y., McKendrick, K., Banks, S., & Stommel, J. (2004). Modified TC for MICA offenders: Crime outcomes. *Behavioral Sciences & the Law, 22*(4), 477-501. Retrieved from http://vb3lk7eb4t.search.serialssolutions.com.libproxy.lib.unc.edu/?sid=Entrez:PubMed&id=pmid:15282836

Schmitz, J. M., Averill, P., Sayre, S., McCleary, P., Moeller, F. G., & Swann, A. (2002). Cognitive-behavioral treatment of bipolar disorder and substance abuse: A preliminary randomized study. *Addictive Disorders & their Treatment, 1*(1), 17-24. Retrieved from https://auth-lib-unc-edu.libproxy.lib.unc.edu/ezproxy_auth.php?url=http://search.ebscohost.com.libproxy.lib.unc.edu/login.aspx?direct=true&db=rzh&AN=106813654&site=ehost-live&scope=site

Silver, B., Prochaska, J. M., Mederer, H., Harlow, L., & Sherman, K. (2007). Advancing women scientists: Exploring a theoretically grounded climate change workshop model. *Journal of Women and Minorities in Science and Engineering, 13*(3), 207–230.

Substance Abuse and Mental Health Services Administration (SAMHSA). (2002, November). *Report to congress on the prevention and treatment of co-occurring substance abuse disorders and mental disorders*. Rockville, MD: U.S. Department of Health and Human Services. Retrieved from http://www.ct.gov/dmhas/lib/dmhas/cosig/cooccurringreport.pdf

Substance Abuse and Mental Health Services Administration (SAMHSA). (2003). *Strategies for developing treatment programs for people with co-occurring substance abuse and mental disorders*. Rockville, MD: U.S. Department of Health and Human Services. Retrieved from http://www.fccmh.org/resources/docs/Strategies.pdf

Substance Abuse and Mental Health Services Administration (SAMHSA). (2005). *Substance abuse treatment for persons with co-occurring disorders: Treatment improvement protocol (TIP)*. Rockville, MD: U.S. Department of Health and Human Services. Retrieved from http://files.eric.ed.gov/fulltext/ED491572.pdf

Substance Abuse and Mental Health Services Administration (SAMHSA). (2011a). *Dual diagnosis capability in addiction treatment (DDCAT) toolkit, version 4.0.* Rockville, MD: U.S. Department of Health and Human Services. Retrieved from http://ahsr.dartmouth.edu/docs/DDCAT_Toolkit.pdf

Substance Abuse and Mental Health Services Administration (SAMHSA). (2011b). *Dual diagnosis capability in mental health treatment (DDCMHT) toolkit, version 4.0*. Rockville, MD: U.S. Department of Health and Human Services. Retrieved from http://ahsr.dartmouth.edu/docs/DDCMHT_Toolkit.pdf

Substance Abuse and Mental Health Services Administration (SAMHSA). (2012, March). *National Surveys on Drug Use and Health Substance Use and Mental Disorders in Selected Metropolitan Statistical Areas, 2005-2010*. Retrieved from http://www.samhsa.gov/data/sites/default/files/NSDUHMetroBriefReports/NSDUHMetroBriefReports/NSDUH_Metro_Tables.pdf

Substance Abuse and Mental Health Services Administration (SAMHSA). (2014). *Mental health and substance use disorders*. Retrieved from http://www.samhsa.gov/disorders

Substance Abuse and Mental Health Services Administration (SAMHSA). (2015). *Behavioral health trends in the United States: Results from the 2014 National Survey on Drug Use and Health*. Retrieved from https://www.samhsa.gov/data/sites/default/files/NSDUH-FRR1-2014/NSDUH-FRR1-2014.pdf

Swofford, C. D., Kasckow, J. W., Scheller-Gilkey, G., & Inderbitzin, L. B. (1996). Substance use: A powerful predictor of relapse in schizophrenia. *Schizophrenia Research, 20*(1), 145-151. Retrieved from http://vb3lk7eb4t.search.serialssolutions.com.libproxy.lib.unc.edu/?sid=Entrez:PubMed&id=pmid:8794502

Tiet, O. Q., & Schutte, K. K. (2012). Treatment setting and outcomes of patients with co-occurring disorders. *Journal of Groups in Addiction & Recovery*, *7*(1), 53-76. doi:10.1080/1556035X.2012.632330

Torrey, W. C., Drake, R. E., Cohen, M., Fox, L. B., Lynde, D., Gorman, P., & Wyzik, P. (2002). The

challenge of implementing and sustaining integrated dual disorders treatment programs. *Community Mental Health Journal*, *38*(6), 507-521. Retrieved from http://vb3lk7eb4t.search.serialssolutions.com.libproxy.lib.unc.edu/?sid=Entrez:PubMed&id=pmid:12474938

UnitedHealthcare. (2016). *TennCare 2016: Administration manual*. Retrieved from https://www.uhccommunityplan.com/content/dam/communityplan/healthcareprofessionals/providerinformation/TN-Provder-Information/TN_Admin_Guide.pdf

University of North Carolina at Chapel Hill, Office of Human Research Ethics. (2016). *Determine whether IRB review is required.* Retrieved from http://research.unc.edu/offices/human-research-ethics/getting-started/faq/#whatrev

Watkins, K. E., Burnam, A., Kung, F. Y., & Paddock, S. (2001). A national survey of care for persons with co-occurring mental and substance use disorders. *Psychiatric Services, 52*(8), 1062-1068. Retrieved from http://ps.psychiatryonline.org/doi/full/10.1176/appi.ps.52.8.1062

Wetterneck, T. B., Skibinski, K. A., Roberts, T. L., Kleppin, S. M., Schroeder, M. E., Enloe, M., . . . Carayon, P. (2006). Using failure mode and effects analysis to plan implementation of smart I.V. pump technology. *American Journal of Health-System Pharmacy, 63*(16), 1528-1538. doi:10.2146/ajhp050515

Whysall, Z. J., Haslam, C., & Haslam, R. (2007). Developing the stage of change approach for the reduction of work-related musculoskeletal disorders. *Journal of Health Psychology, 12*(1), 184-197.

Woltmann, E. M., & Whitley, R. (2007). The role of staffing stability in the implementation of integrated dual disorders treatment: An exploratory study. *Journal of Mental Health, 16*(6), 757-769. Retrieved from http://www.tandfonline.com.libproxy.lib.unc.edu/doi/pdf/10.1080/09638230701496402

World Health Organization [WHO]. (1981). *Health programme evaluation.* Retrieved from http://apps.who.int/iris/bitstream/10665/40674/1/9241800062.pdf

Young, M., Barrett, B., Engelhardt, M., & Moore, K. (2014). Six-month outcomes of an integrated assertive community treatment team serving adults with complex behavioral health and housing needs. *Community Mental Health Journal, 50*(4), 474-479. doi:10.1007/s10597-013-9692-5

ZiaPartners, Inc. (2016). *Compass-EZ: A Self-Assessment Tool for Behavioral Health Programs*. Retrieved from http://www.ziapartners.com/tools/compass-ez/