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Delusional Disorder: Treatment and the Restoration of Adjudicative Competence

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by

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ABSTRACT

DELUSIONAL DISORDER: TREATMENT AND THE RESTORATION OF ADJUDICATIVE COMPETENCE

by

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Delusional disorder has long been recognized in the psychiatric nomenclature, however, low prevalence rates and prevailing clinical views about the seemingly refractory nature of delusional disorder have restricted data on clinical treatment outcomes for this illness. Similar perspectives have been noted in forensic settings where minimal data is available to guide standards of care for incompetent to stand trial (IST) delusional pretrial defendants. *Rationale.* While the factors explicated in *Sell* provide guidelines for the involuntary medication of defendants found IST, numerous questions are left unanswered regarding the restorability of pretrial delusional detainees. The proposed study investigated the competency restoration rates of defendants with delusional symptoms and, more broadly, using the Brief Psychiatric Rating Scale (BPRS) assessed how these symptoms impact competency related abilities. *Method.* Data were gathered from competency restoration reports at a federal medical center. A total of 232 cases were drawn with replacement from a five year span, and then coded for demographic, clinical, and psycholegal variables. *Results.* Nearly 60% of defendants suffered with one or more

delusions, and the delusional ideation for those who met the BPRS threshold for a delusional disorder (DD) classification was more pervasive than for those in either the schizophrenia or mood with psychosis subgroups. Defendants in the DD subgroup were also more likely to refuse treatment. The logistic regression model showed adequate overall classification (63.4%) and one static variable, i.e., prior psychiatric treatment, reached statistical significance; indicating that those with such a history were less likely to be restored. *Discussion.* The high rates of treatment refusal for DD defendants meant that most of these defendants were opined IST after their first statutorily determined competency restoration period, however, this group was no less likely to be opined restorable by forensic examiners given an adequate trial of involuntary treatment with antipsychotic agents.

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In memoriam, Nobomvu Daisy Shange (1929-2013), Uyohlala ukhanya Ma.

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Chapter One

Introduction

Delusional disorder, previously falling under the broad designation of paranoia, has been recognized for centuries (Fennig, Fochtmann, & Bromet, 2005). In the past paranoia, derived from ancient Greek *para* (beside) and *nous* (mind), was typically used as a common reference to madness (and even dementia). Emil Kraepelin (1904/1917) considered the concept of paranoia inextricably bound to the development of psychiatry as a discipline and, presently, persecutory or paranoid beliefs are recognized as the most prevalent theme underpinning the delusions of psychotic patients (American Psychiatric Association, 2000). The presence of nonbizarre delusions with the relative absence of other forms of psychopathology is a central feature of delusional disorder. In non-clinical populations, rates of delusional ideation have been reported to be between 10-15% while another 1-3% of people in the general population evidence delusional beliefs that reach clinical significance (Freeman, 2006). As a diagnostic entity delusional disorder has been better delineated in the fourth edition of Diagnostic and Statistical Manual of Mental Disorders (DSM-IV; APA, 1994) and the subsequent DSM-V (APA, 2013). The nosological differentiation from schizophrenia and mood disorders has allowed for a slow but steady increase in clinical research on this disorder. Still, as Fennig and colleagues (2005) indicate the nosological status of delusional disorder has been subject to intense debate since the early taxonomic contributions on paranoia by Kraepelin (1904/1917).

The number of inmates in the United States with major mental illness has steadily risen (Lamberti & Weisman, 2004). At the same time mental health concerns in offender populations are brought up with some regularity in pre-trial proceedings, especially for

cases where adjudicative competence is at issue. Nationwide there are close to 60,000 competency evaluations conducted annually (Bonnie & Grisso, 2000), and the financial burden and time associated with adjudicative competence has been well documented (Golding, 1992). Most defendants referred for competency restoration are successfully treated; consequently the accurate identification of those who respond poorly holds significant value (Zapf & Roesch, 2009) within this criminal justice domain.

Current research indicates that defendants found incompetent to stand trial (IST) under *Dusky v. United States* (1960) usually suffer from more severe clinical disorders, predominantly psychotic disorders (Otto, 2006). Patients living with delusional disorder seldom, if ever, seek treatment voluntarily as they typically deny having a mental illness. Additionally, the quality of their psychotic symptoms often does not rise to the point of serious functional impairment in their daily lives. However, their contact with mental health professionals is often precipitated by some legal dilemma (Felthous, Stanislaus, Hempel, & Gleyzer, 2001), but related treatment outcome data for IST defendants diagnosed with delusional disorder is severely limited.

The literature on the treatment of delusional disorder mostly consists of individual case reports of non-randomized studies with small sample sizes. Further, treatment guidelines for this condition are typically gleaned from the protocols of other psychotic disorders such as schizophrenia where more effort has been expended on studies of treatment efficacy (Felthous et al., 2001). Also contributing to the scarcity of data on the restorability rates of delusional defendants is the notion, both in the clinical (Manschrek & Khan, 2006) and forensic literature (Liokis & Herbert, 2005), that delusional disorder is highly stable and resistant to treatment. For example, psychiatric testimony proffered in

United States v. Ghane (2004) before the Eight Circuit Court of Appeals explained that only 10% of these patients experience symptom reduction when treated with psychotropic medication, suggesting a very low probability for competency restoration.

To date the number of studies investigating competency restoration for defendants diagnosed with delusional disorder (DD) have been negligible. The current study hopes to add to the small body of research on CST restoration, and to expand existing knowledge about restoration outcomes for DD defendants. Further, a focus on specific symptoms and their role on CST restoration rather than diagnostic categories can potentially provide a more nuanced understanding of competency restoration efforts for this group of defendants.

The first part of the literature review provides an overview of the diagnostic evolution of DD - from early links to paranoid ideation to current diagnostic understanding. A number of scholars have given this subject more comprehensive coverage (see for example, Kendler, 1981; Lewis, 2009; Schifferdecker & Peters, 1995). The introductory section focuses on the diagnostic underpinnings of delusional disorder, and thereafter treatment and outcome data for this psychotic disorder is reviewed, The primarily focus in this section is on the treatment of delusional disorder, and concludes with an explication of the forensic implications for pretrial incompetent to stand trial (IST) defendants diagnosed with this condition.

The latter part of the literature review provides an outline of competency to stand trial (CST), specifically procedural aspects, and then addresses competency restoration. Here the discussion of competency restoration or treatment in the forensic context is more extensive than the much broader legal concept of competency. Finally, a review of

DD within the context of CST restoration is delineated, concluding with the research questions relevant for the current study

Chapter Three of this study outlines the methodology with the results section presented in Chapter Four. The final chapter provides a discussion of the results gleaned from the current study. Here the caveats and limitations of the current study are also addressed. This chapter concludes with a discussion of the strengths of the study and potential avenues for future studies.

Chapter Two

Delusional disorder: Treatment and Competency Restoration

Nosological Development of Paranoid Disorders

Paranoid disorders were a common subject of focus in the psychiatric writings of the eighteenth and nineteenth century. A notable predecessor to Kraepelin's classification of paranoia was Karl Kahlbaum (1878/2007) whose work illustrated the anomalous nature of paranoid ideation across a range of medical conditions. Kahlbaum devoted much attention to the prognostic features of mental illness and derived much of his understanding from clinical observation. He argued that paranoia was a subgroup of partial psychosis with no underlying organic etiology. Prognostically he viewed paranoia as a chronic disease characterized by intellectual symptoms that remained constant over time (Kahlbaum, 1878/2007).

A seminal contribution in Kraepelin's (1904/1917) diagnostic classification system of paranoia was his differentiation of this illness from dementia praecox (or schizophrenia) and manic-depressive insanity (or bipolar mood disorder). This taxonomy not only gave prominence to paranoia within psychiatric annals, but formed the basis for the formal introduction of delusional disorder (DD) some seven decades later. Kraepelin frequently revised his ideas on paranoia, outlining the complexity of this concept in subsequent editions of his textbook. Kraepelin (1904/1917), like Kahlbaum before him, formulated his conclusions from observing the natural course of the illness rather than etiological factors, which remain relatively obscure even to this day. Kraeplin considered paranoia a chronic illness marked by the presence of a fixed delusional system, an absence of hallucinations, and a personality left largely intact. Muck like Kahlbaum

(1878/2007), who identified intellectual symptoms as fundamental to paranoia, Kraepelin (1917) wrote, "[I]n this delusionary working-up the considerable *weakness of judgment* (emphasis retained) of the patient becomes very apparent" (p.146). Kraepelin identified four delusional subtypes: persecutory, jealous, grandiose, and hypochondriacal and, for the most part, delusions have been classified by their content and/or theme ever since.

Subsequent attempts to better delineate paranoid disorders were made by Karl Jaspers (1963), who viewed delusions as "pathologically falsified judgments" (p.95). In his clinical observations Jaspers noted that the beliefs of patients with this illness were often held with a strong subjective certainty or conviction, were incorrigible, and were characterized by a falsity of content. However, Jaspers only provided a guideline for the clinical assessment of delusions and duly cautioned, "[simple] definition will not dispose of this matter" (Jaspers, 1963, p.93). His overall view of delusions was that they were not understandable or incomprehensible and, consequently, not amenable to psychological inquiry. Instead, he argued, they were to be viewed phenomenologically (via the expression of the patient) and not on the basis of their content.

Large multisite studies examining the broader construct of delusions have reported some plasticity in delusional content over time, and associated persistence of delusions with a range of factors. These include older age, a diagnosis of schizophrenia, and marital status (Appelbaum, Robbins, & Vesselinov, 2004). Still, even today observations about the chronicty and seemingly autochthonous nature of delusional disorder continue to confound treatment and prognostic outlooks. While the former implies a resistance to treatment, the latter alludes to a possible explanation for the

limited controlled treatment trials for delusional disorder and, why drug studies tend to lump delusional disorder together with other psychotic spectrum disorders.

Diagnostic Classification

Initial diagnostic classifications (e.g., DSM-I, 1952; DSM-II, 1968) did not distinctly rule out hallucinations in non-schizophrenic paranoid conditions; however, DSM-III-R (1987) saw the formal introduction of the term delusional disorder (DD) and, with that, a move away from the less circumscribed paranoid disorder outlined in previous classifications(see Table 1). The current diagnostic classification (DSM-V) lists DD under the category of psychotic disorders, where the primary distinction from other disorders in this category is the presence of a delusion in the relative absence of other psychotic features (APA, 2013). Functional impairment, when present, is directly attributable to the delusion rather than to other psychotic symptoms. The current DSM-V definition of DD essentially retains the Kraepelian conception of the illness; a position that views DD as distinct from schizophrenia and bipolar mood disorder.

Table 1

Historical Overview of the Prognostic Outlook

Data Source	*Diagnostic label*	*Comments on prognosis*
Kahlbaum (1878/2007)	Paranoia	Incurable, may progress to dementia
Kraepelin (1904/1917)	Paranoia	Chronic with limited deterioration in personality
Jaspers (1923/1963)	Primary delusions	Chronic with a concomitant change in personality
DSM I (1952)	Paranoid reactions	Persistent with intelligence preserved
DSM II (1968)	Paranoid states	Minimal differentiation from course of schizophrenia
DSM-III-R (1987)[a]	Delusional disorder	Relatively variable course, ranges from chronic to periods of full remission without relapse
DSM-IV (1994) & DSM-IV-TR (2000)	Delusional disorder	Similar to DSM-III-R, better prognosis for persecutory type associated with a precipitating event
DSM-V	Delusional disorder	Disorder generally stable, although some patients later develop schizophrenia

[a] Introduces term delusional disorder as a distinct diagnostic entity

A number of conditions need to be ruled out prior to a diagnosis of DD, such as schizophrenia (paranoid type), psychotic mood disorder, dementia, drug-induced psychotic disorder, hypochondriasis, and paranoid personality disorder.

Some early scholars, notably Jaspers, eschewed the prevailing content-based classification of delusions; but, while he argued for a phenomenological approach (Jaspers, 1963), more recent authors have argued for a dimensional characterization of delusions (Appelbaum, Robbins, & Roth, 1999). For example, empirical data from large multisite studies have shown some plasticity (variable intensity) and shifts in delusional content over time (Appelbaum, Robbins, & Vesselinov, 2004), pointing to the limitations of the current content dominated nosology of delusions. Nevertheless, current classification of DD defines delusions as "fixed beliefs that are not amenable to change in the light of conflicting evidence" (APA, 2013) and subdivides delusions based on their content. Historically delusions, hallucinations, thought disorder, disorganized/abnormal behavior, and negative symptoms are the domains comprising psychotic illness. And. DD is the only psychotic disorder characterized by a disturbance in only one of the aforementioned five domains. The principle subtypes are outlined below based on DSM-V criteria.

- Persecutory: The central theme of the delusion is that one (or someone to whom one is close) is under attack, being harassed, persecuted, or conspired against.
- Jealous: A delusion that one's intimate partner is unfaithful.
- Erotomanic: A delusion where the individual believes another person, usually of higher social status, is in love with him/her.

- Grandiose: The overriding theme of this delusion is one of inflated self-worth, power, knowledge, identity, or that one has a special relationship to a deity or famous person
- Somatic: The delusion that one has some physical defect or general medical condition. In an effort to distinguish the somatic type from body dysmorphic disorder DSM-V is expected to classify this type solely on the delusion that the person has some medical condition (APA, 2010).
- Mixed type: This involves a combination of two or more of the types described above.

The prevailing diagnostic nomenclature defines a delusion as a fixed rather than "erroneous" (as in DSM-IV), belief that remains intractable in the face of contradictory evidence. In the current DSM nosology a delusion can be nonbizarre (conceivable events that can occur in everyday life) or bizarre, which involves phenomenon that others in the individual's culture would regard as completely implausible. The prior emphasis on the bizarreness, often a complex, mercurial concept, of a delusion presented special challenges—a fact that has not gone unrecognized in the prevailing diagnostic nomenclature. Typically, the bizarreness of a delusion is inferred from its cultural and objective implausibility, but prior operational definitions have not been satisfactory, and a number of researchers have questioned the overall reliability of bizarre delusions (Cermolacce, Sass, & Parnas, 2010; Bell, Halligan, & Ellis, 2006). These conceptual shortcomings have, to a considerable extent, bolstered the argument against the sufficiency of a single bizarre delusion for diagnosing schizophrenia, and contributed to

some substantive revisions of psychotic spectrum disorders in the most recent diagnostic classification.

Aside from discarding the DSM-IV subtypes of schizophrenia another notable change in DSM-V is that a bizarre delusion no longer precludes a differential diagnosis of DD. Presently a solitary bizarre delusion on criterion A is no longer sufficient for a diagnosis of schizophrenia. As a consequence current conceptualization of DD allows for a single bizarre or nonbizarre delusion. DSM-V also allows for severity ratings of delusions, although diagnosis can be made independent of severity specifiers. Finally, to delineate DD more clearly from obsessive-compulsive disorder and body dysmorphic disorder the latter conditions now represent distinct diagnoses (with or without psychotic features) as opposed to the dual diagnosis classified in earlier editions.

Although these subsequent editions of the DSM endeavored to distinguish delusional disorder from schizophrenia and mood disorders, delusions remain common to the latter two disorders. This is further borne out in cross cultural studies with schizophrenia, which show that persecutory ideation is by far the most common content in the delusions of schizophrenic patients (Stompe et al., 1999). In terms of mood disorders, empirical evidence indicates that a fair number of patients who suffer from depression (Manschrek & Khan, 2006) and bipolar mood disorder (Goodwin & Jamison, 2007) experience persecutory delusions during acute episodes. Specifically, Goodwin and Jamison found persecutory ideation to be a feature in 29% of manic episodes. As Munro (1988) pointed out more than two decades ago, "the relationship between affective and delusional disorders is a complex one, but there is no doubt that a relationship exists" (p.176).

Additional evidence for this connection is found in pharmacotherapy reviews that show some effectiveness for antidepressants in combination with antipsychotics when treating delusional disorder (Manschrek & Khan, 2006). Taken together, the aforementioned findings suggest that the present day clinical picture and treatment of delusional disorder continues to reflect its shared nosological roots with schizophrenia and mood disorders.

Epidemiology. Existing data suggests 10-15% of non-clinical samples report delusional ideation, while an estimated 1-3% of people in the general population report delusional beliefs that reach clinical significance (Freeman, 2006). The prevalence rate (0.02%) for DD is low, with a lifetime morbidity risk of 0.05% to 0.1% (APA, 2013) and patients in this diagnostic category seldom seek treatment voluntarily. However, with the recent changes (the inclusion of a single bizarre delusion) to diagnostic classification mental health professionals will no doubt see an increase in prevalence rates for DD.

Treatment of Delusional Disorder

Differences in treatment response time for psychotic symptoms contributes to the clinical lore that DD is difficult to treat. For example, Gunduz-Bruce et al. (2005) reported significantly longer treatment response times (in days) for delusions (median = 76, M = 150, SD = 239) compared to hallucinations (median = 27, M = 59, SD = 104) for a sample (N = 118) suffering first episode schizophrenia.

***Psychological Treatment*.** A review of the extant literature suggests that treatment outcomes for DD are variable. Evidence for this conclusion was found in the MacArthur Violence Risk Assessment Study by Appelbaum et al., (2004), which simultaneously

underscored both the chronicity and change in delusions over time. Using DSM-III diagnostic criteria, Appelbaum et al. (2004) collected baseline and follow-up (five interviews) data from more than 1,000 psychiatric patients in this multisite study. Their findings suggest marked variability in the content and intensity of delusions over time, but they also found that certain factors increased the likelihood of persistent delusions, e.g., a baseline diagnosis of schizophrenia.

To date no structured psychological treatment for DD has been delineated and research in the area mainly consists of single case reports or studies with small nonrandomized samples yielding mixed results. For example, Chadwick and Lowe (1994) reported a reduction in delusional convictions over a six month period for most of their sample (N=12) using verbal challenges and reality testing. In contrast, Sharp et al. (1996), using the same CBT techniques as the former authors, reported significantly lower response rates.

More broadly, cognitive-behavior therapy (CBT), which has been applied in the treatment of schizophrenia, has only recently been used to treat DD (Manschrek & Khan, 2006), where part of the therapy centers on a collaborative effort between patient and therapist to evaluate the facts of the delusional beliefs and to work on mistrust. According to O'Connor et al. (2007), current practice in the CBT for delusional disorder comprises three stages: preparing the patient for therapy, cognitive challenges of the delusional conviction(s), and reality testing to allow for disconfirmation of the false conviction(s).

More recent data has found weak to moderate main effects on various dimensions of the Maudsley Assessment of Delusions Schedule (MADS) for CBT compared with an attention placebo control (APC) (O'Connor et al., 2007). Unfortunately, the sample size

for this study was rather small thus limiting any clinical conclusions. Current clinical practice shows that psychotropic medication remains the first line of treatment for this group of psychotic patients[1]. Still, the moderate success of CBT approaches suggests that DD is not impervious to psychological intervention.

***Pharmacotherapy*.** The first line of treatment for schizophrenia and other psychotic disorders such as DD is antipsychotic (neuroleptic) medication. As with psychotherapeutic intervention, drug treatment studies of DD are also limited by insufficient scientific data. As Smith and Buckley (2006) note, "there is not a single randomized, controlled psycho-pharmacological trial for treating this [delusional disorder] illness" (p.351). However, these authors made the point that certain newer second generation antipsychotics (SGAs), e.g., olanzapine, aripirazole, and quietiapine, may prove effective in the treatment of DD. Further, since no specific class of medication is indicated for the treatment of DD, guidelines for treatment are typically gleaned from the protocols of other psychotic disorders, such as schizophrenia, where more effort has been expended on studies of efficacious treatment (Felthous et al., 2001). Together these factors have severely limited any systematic evaluation of the prognostic features of DD.

Before the advent of atypical antipsychotics a few clinical studies showed efficacy for the orally administered older first generation antipsychotic (FGA) Pimozide in the treatment of DD and clinical consensus continues to support its use (O'Connor et al., 2007). For example, in a review of 209 clinical case reports, Munro and Mok (1995) reported a recovery rate of 68.5% for the 143 patients treated with Pimozide[2]. The rest of

[1] Additionally illustrated in the Supreme Court's comparison of amicus briefs in *Sell v. United State* (2003) submitted by the American Psychological Association (Amicus Curiae 10-14) and the American Psychiatric Association et al. (Amici Curiae 13-22).

[2] Also see McCoy; Schwarzkopf, and Martin (1992) who cite successful outcomes in a number of cases.

the patients in their sample were treated with other typical antipsychotics such as haloperidol and thioridazine. Further, these authors reported total or partial recovery for approximately 80% of cases (Munro & Mok, 1995). Based on these results they concluded that DD, contrary to widespread opinions, has treatment outcomes comparable to other psychiatric conditions.

Manschrek and Khan (2006) conducted a follow up on the work of Munro and Mok (1995), reviewing published cases from a number of databases over a ten year period (1994-2004). They identified a total of 224 cases and from those cases with sufficient outcome data (n=134) they reported results consistent with those of Munro and Mok (1995). Manschrek and Khan (2006) reported full recovery in nearly half (49.3%) of the cases reviewed while 10.4% of the sample showed no improvement. Another notable finding, from Manschrek and Khan's (2006) study was the significantly better response rates for somatic delusions compared to other subtypes. Most patients in their study had a favorable response to treatment regardless of the type of antipsychotic medication administered. By extension, their study found no statistically significant difference in outcome rates between patients treated with FGAs and SGAs.

This is an important finding given the drug safety concerns associated with older FGAs such as Pimozide. The side effect profile of FGAs has been well documented in the extant literature and is notable for movement disorders such as tardive dyskinesia, Parkinsonian effects, dystonic reactions, and akathisia. For example, Elmer, George and Petersen (2000) cited a number of adverse side effects associated with Pimozide such as tardive dyskinesia and, more seriously, cardiac conduction defects (Food and Drug Administration, 2002). The subsequent predominance of SGAs in recent years is largely

attributable to their more circumscribed side effects profiles. Although no less serious the adverse effects of these newer drugs include inter alia sedation, hypotension, weight gain, and decreases in white blood cell counts.

What more recent clinical reviews, such as the study conducted by Manschrek and Khan (2006), show is that atypical antipsychotic medication or SGAs (e.g., Risperidone) may hold some promise in the treatment of DD; above and beyond the limited data citing the efficacy of older, typical (FGAs) psychotropic agents. Additional data point to the usefulness of selective serotonin reuptake inhibitors (SSRIs) but to date no controlled studies have been conducted to determine the efficacy of these drugs. In addition, current drug therapies not only allude to the nosological link between DD and other psychotic and mood disorders, but also point to the prevalence of polypharmacy (Manschrek & Khan, 2006), often comprising different combinations of antipsychotics and antidepressants.

A notable methodological caveat inherent to all the preceding clinical reviews, which Manschrek and Khan (2006) acknowledge, is the reluctance of researchers/ clinicians to publish data on failed cases. In addition, these studies rate recovery on a continuum, thus relying on clinical judgment rather than on objective outcome measures. Notwithstanding these findings, which show some amenability to treatment for DD, the long held notion that this psychotic disorder is highly stable and resistant to treatment persists within both clinical (Manschrek & Khan, 2006) and forensic mental health settings (Liokis & Herbert, 2005).

The pronounced lack of insight inherent to DD drives these patients' characteristic opposition to psychiatric treatment and as a result they are left largely undetected by

public health practitioners. Unsurprisingly, when these individuals do make contact with mental health professionals it often occurs against the backdrop of some litigious undertaking or criminal complaint (Goldstein, 1995; Felthous, Stanislaus, Hempel, & Gleyzer, 2001). When individuals with paranoid ideation, who are characteristically querulous and suspicious, encounter the criminal justice system "[p]aranoid concerns may result in a range of troublesome or dangerous behaviors, from litigiousness and morbid jealousy, to more violent crimes" (Goldstein, 1995, p.304). Delusional convictions may impact a defendant's reasoning and actions across a range of legal domains, e.g., competency to confess or testamentary capacity in matters of civil litigation. When there is credible doubt that a defendant's competency may be impaired the courts have a vested interest, based on the concept of fundamental fairness and due process protections, to take remedial action.

The goal of competency evaluations is the determination of how the underlying clinical disorder impacts functional components of competency. As such, the *incorrigible fault in judgment* or thinking inherent to DD, long since recognized by scholars (Kahlbaum, 1878/2007; Kraepelin, 1904/1917; Jaspers 1923/1963), renders defendants with this illness ever more susceptible to such functional impairment, especially given the explicit emphasis on rational ability set out in current competency standards. Beyond mere factual knowledge about courtroom proceedings, problems with decisional capacity and the ability to work collaboratively with counsel in the pursuit of workable defense strategies underlines some of the challenges for defendants suffering with DD. The study now turns to a review of competency to stand trial and those factors salient to initial competency.

Competency to Stand Trial

***Standard and Procedural Aspects*.** Criminal competency encompasses a sizable portion of the judicial landscape ranging from pretrial issues such as competency to confess to posttrial matters involving sentencing. Over the years the Supreme Court has rendered a number of landmark decisions on criminal competency including, but not limited to, *Dusky v. United States* (1960), *Godinez v. Moran* (1993), and *Indiana v. Edwards* (2008). Even though courts recognize *Dusky* as the constitutionally minimal competency standard, subsequent Supreme Court decisions demonstrates the breadth and complexity of this legal construct. For example, in *Godinez* the Court proffered *Dusky* as a unitary competency standard, and more recently, appeared to rule against the latter notion by denying self-representation (a higher competency standard as argued by the majority) for an otherwise competent to stand trial, but mentally ill defendant in *Edwards*.

The law requires, based on the principles of fundamental fairness and due process protection, and to maintain the dignity of the adversarial process, that defendants be sufficiently *present*' to participate in the legal proceedings against them. By far the most commonly requested psycholegal evaluation across jurisdictions is for competency to stand trial (CST) or fitness to proceed. Estimates place the annual number of court-ordered referrals for CST evaluations around 60,000 across the United States (Bonnie & Grisso, 2000) with concomitant financial expenditure that runs into hundreds of millions of dollars. And, although the specific statutes for CST vary across jurisdictions all states

share common procedural underpinnings as well as the constitutionally minimal standard as set out in *Dusky*[3]

In *Dusky v. United States* (1960) the Supreme Court held that a defendant must have "sufficient present ability to consult with counsel" and a "reasonable degree of rational" as well as factual "understanding of the proceedings against him" (p. 402). Unlike mental state at the time of the offense CST refers to a defendant's mental state at the time of the trial, i.e., ability present during legal proceedings. Consequently being uncooperative or unwilling, or mere ignorance of criminal proceedings would not preclude a finding of competency.

In criminal courts, competency implies an ability to understand the legal proceedings at hand and to participate meaningfully in the trial processes, what constitutes the *sine qua non* of a just legal system. The constitutionally minimal standard set out in *Dusky* (1960) serves to safeguard those with sufficiently severe impairment of their competence-related abilities, whether through mental illness and/or cognitive impairment, ensuring they are not put on trial without an assessment (and if needed remediation) of the aforementioned abilities.

The determination of competency involves a number of stages and is generally set in motion by a request for an evaluation of a defendant's CST. This initial request can be raised by any officer of the court and can occur at any given stage of adjudication whenever a "bona fide doubt" exists about a defendant's competency (Grisso, 2003). The US Supreme Court articulated the "bona fide doubt" standard in *Drope v. Missouri* (1975), and ruled that court principals (judge, defense, and/or prosecutor) had an

[3] Subsequent cases such as *Drope, Weiter, Godinez,* and *Edwards* have elaborated on the *Dusky* standard.

affirmative duty to raise competency concerns when warranted. An array of circumstances can set a CST evaluation in motion. For example, difficulties communicating with defense counsel, volatile or odd behavior displayed in the courtroom, the bizarreness of the alleged offense, or a prior history of IST can all prompt requests for competency evaluations.

Following the court's motion for an evaluation, the defendant is then evaluated by one or more mental health professionals, typically while still incarcerated (although a number of states also permit more cost-effective outpatient evaluation). Evaluation methods for CST vary across jurisdictions and mental health professionals and, as Cooper and Zapf (2003) point out, there is no singular, standardized tool to assess CST. The volume and quality of CST assessment instruments has seen steady development over the past few decades. Assessment in this area often includes structured, criterion-based psycholegal instruments (see Otto, 2006; see Scott, 2003) to more traditional measures of psychopathology and personality (Pirelli, Gottdiener, & Zapf, 2011). An effective CST evaluation will underscore the impact of a defendant's mental illness on their ability to understand the proceedings against them, and their ability to rationally assist defense counsel. Therefore, the fundamental determination for the forensic examiner is how "any psychopathological or cognitive difficulties [relate] to possible impairments in the defendant's psycholegal abilities" (Skeem & Golding, 1998, p. 358).

If a judicial finding of IST is made following the court-ordered evaluation, a defendant is typically remanded to a period of inpatient treatment in a forensic mental health facility with the goal of competency restoration. Across most jurisdictions the forensic examiner will then offer an opinion about a defendant's competency, but the

ultimate opinion rests with the trier of fact. However, as Zapf, Hubbard, Cooper, Wheeles, & Ronan (2004) point out, more often than not courts appear to abdicate this judicial opinion to forensic examiner s/clinicians.

Existing research suggests that approximately 1 of every 4 defendants referred for a CST evaluation is adjudicated IST. Single studies with relatively large samples, for example Hubbard et al. (2003) with 468 defendants remanded for CST evaluation in Alabama, place the rate of IST findings around 20%. This is consistent with the modal estimate made by Roesch, Zapf, Golding, & Skeem (1999), and a recent meta-analytic study placing the base rate for IST findings at 27.5% (Pirelli et al., 2011).

Defendants adjudicated competent proceed to trial, but when a defendant is found unfit to proceed or IST other potential outcomes unfold. Cases involving relatively minor, misdemeanor offenses are typically dismissed often with the agreement that the defendant will seek treatment. However, defendants are generally remanded when found IST to allow for a period of competency restoration. *Jackson v. Indiana* laid the groundwork for the adjudication of pretrial IST defendants, and the curtailment of indefinite civil commitment as a substitute for a criminal trial. In 1968, based on the existing statutes at the time, an Indiana court committed a Theon Jackson (a pretrial IST defendant) to the state Department of Mental Health until such time as he could be certified "sane". Mr. Jackson was deaf, mute, and illiterate, and charged with robbery. Defense counsel argued that Mr. Jackson's commitment was tantamount to indefinite/lifelong commitment since his condition was irremediable. After granting *certiorari* the US Supreme Court ultimately held in *Jackson* (1972) that a defendant found IST could not be held beyond a "reasonable period of time necessary to determine

whether there is a substantial probability" of CST restoration "in the foreseeable future" (p.738). Those not likely to be restored could either be civilly commitment or released, absent a finding of dangerousness.

Current data show that a number of states statutorily require IST defendants to be re-evaluated for adjudicative competence at least once every 6 months during the course of restoration (Grisso, Borum, Edens, Moye, & Otto, 2003). Additional time beyond the initial term for restoration is generally granted in cases where a reasonable likelihood of restoration exists. In cases where defendants are not restored to competency following a *reasonable* period of time, they are likely to be (conditionally) released pursuant to *Jackson v. Indiana* (1972) if they do not pose a substantial risk of harm. The duration of such commitments for restoration are statutorily determined, either comprising a set period of time or a proportion of the length of the sentence the defendant may have received if he were (competent and) convicted. In *Jackson* the Court did not explicitly specify what a "reasonable period" is and the statutes setting out the confinement periods of pretrial IST defendants varies notably across states. According to Kaufman, Way, and Suardi (2012) 28% of states specify a period of 1 year or less, 22% link the time period to the penalty of the charged offense, 20% specify a period of 1 to 10 years while another 30% do not specify a limit.

The extant literature shows that defendants found IST typically suffer from more severe clinical disorders (Otto, 2006) and scholars consistently report a significant relationship between psychosis and adjudicative incompetence (Caldwell, Mandraccia, Ross, & Silver, 2003; Cooper & Zapf, 2003; Skeem, Golding, Cohn, & Berge, 1998; Pirelli et al., 2011; Warren, Rosenfeld, Fitch, & Hawk, 1997; Warren et al., 2006).

Overall, current research suggests that defendants diagnosed with a psychotic disorders are found IST at a greater rate (Hubbart, Zapf, & Ronan, 2003). It is worth noting that a number of other variables have also been associated with IST outcomes (e.g., previous psychiatric hospitalization and unemployment). However, of the eight (sex; race; marital status; employment status; psychiatric diagnosis; psychiatric hospitalization history, CST evaluation history; and index criminal charge) variables examined in the meta-analysis by Pirelli et al. (2011) only psychiatric diagnosis and employment status showed statistical significance. Defendants with a psychotic disorder were eight times as likely to be found IST while the same likelihood was increased twofold for an unemployed defendant. The reader is referred to Pirelli et al. (2011) for a more comprehensive coverage of salient CST determinants.

As a symptom of psychotic illness delusional beliefs, although not always bizarre, may come to incorporate a wide network of criminal justice principals[4], and impair one or more of a defendant's functional (criminal) competency-related abilities under the existing standards (e.g., competency to waive counsel and proceed pro se or competency to stand trial). Specific to competency to stand trial (CST), the focus of the current study, such impairment may include a defendant's ability to consult with counsel and/or his thinking about the proceedings against him. For example, Litwack (2003), citing relevant case law, illustrated the complexity in the adjudicative process brought about by the delusional thinking of criminal defendants. Specifically, he argued how a defendant may meet the threshold for competency to stand trial, but may not necessarily have the

[4] In *United States v. Ghane*, 490 F.3d 1036 (2007), where the (criminal) defendant's persecutory delusions incorporate defense counsel and magistrates in civil cases.

competency to refuse a (viable) counsel recommended insanity defense in order to pursue their own delusionally moored defense.

Of course a diagnosis in and of itself provides little information about a defendant's ability to participate in judicial proceedings and is not synonymous with a finding of IST. For example, one study found as many as 80% of defendants with a psychotic disorder were ruled competent to stand trial by judges and mental health professionals (Viljoen, Roesch, & Zapf, 2002). Under *Dusky*, the presence of a mental disorder is only one step along the path of finding a defendant incompetent to proceed and any psychopathology needs to be related to deficits in psycholegal functioning (Skeem, Golding, Cohn, & Berge, 1998; Zapf & Roesch, 2009). As such the opposite also holds true, i.e., psychiatric symptom alleviation for an IST defendant may not necessarily mean successful restoration to competency.

The cost, both personal and societal, of an IST finding can be substantial. For the defendant individual liberty is curtailed while states on their part incur a sizeable expense for the custodial care of IST defendants. In addition, once a defendant has been found incompetent to stand trial there is no failsafe way to predict his restorability.

Competency Restoration

There is a substantive body of research on initial evaluations and CST adjudications whereas research on competency restoration has been rather limited. This dearth of research on competency restoration is similarly highlighted by Zapf and Roesch (2011) in their review of data in this area. A finding of IST is not a clinical condition but a legal disposition and, as such, does not warrant clinical treatment. Also, there exists no

standardized regimen for competency restoration. However, research has shown that most defendants (upwards of 70%) initially found unfit to proceed are returned to court within six months (Morris & Parker, 2008; Zapf & Roesch, 2011)**.** Subsequent to a discussion of competency restoration approaches a review of factors predictive of restorability is provided.

Restoration Strategies

Most treatment programs for CST restoration aim to diminish psychiatric symptoms while augmenting competency related abilities. CST restoration predominantly occurs within inpatient forensic mental health settings and the administration of psychotropic medication constitutes the most common treatment approach (Zapf & Roesch, 2011).

Medication. The predominant use of antipsychotic medication across jurisdictions for CST restoration is understandable given the association between psychosis and findings of IST. In line with this, Zapf and Roesch (2009) note that successful outcomes in competency restoration often rest on the defendant's response to drug treatment. However, over the past decade there has been a steady increase in the number of studies examining CST restoration approaches other than pharmacological intervention. Many restoration programs utilize a two-pronged approach of treating the underlying symptoms with group-based formats of psycholegal instruction alongside psychotropic medication (Meuller & Wylie, 2007). In these groups, defendants are instructed about basic legal concepts and courtroom procedures using various didactic techniques (e.g., courtroom simulation or mock trials). In addition, defendants may also receive short-term cognitive

behavioral intervention to address psychological problems relevant to their competency status. Overall, the body of research in this area is negligible (Mueller & Wylie, 2007; Zapf & Roesch, 2011) with little agreement about the effectiveness of these interventions in competency restoration (Mueller & Wylie, 2007).

Educational approaches. Although most pretrial defendants consent to treatment with antipsychotic medication (Zapf & Roesch, 2011) there are instances where such intervention is clinically not indicated and/or unwarranted. Further, the inherent invasiveness of psychotropic medication to render a defendant CST highlights the importance of alternative treatments. At least five previous studies have utilized educational/problem-solving strategies in CST restoration. Three of these education based approaches have utilized experimental designs (Mueller & Wylie, 2007; Bertman et al., 2003; Siegel & Elwork, 1990).

The first study, using random assignment, examined the effectiveness of a psycholegal intervention (a psycholegal game) specifically designed for competency restoration (Mueller & Wylie, 2007). Delivered in a group format, the psycholegal game (Fitness Game or FG) instructs participants with respect to key CST criteria and targets problem solving and reasoning abilities. The control group in this study were administered the Healthy Behaviors Game (HBG), which included material on symptom management and substance abuse, but not legal material. Consistent with the findings of Bertman et al. (2003), both the experimental (n = 21) and control (n = 17) groups in this study showed significant pretest to posttest improvements on the 22-item MacArthur Competence Assessment Tool-Criminal Adjudication (MacCAT-CA). Overall Mueller and Wylie (2007) reported relatively small effect sizes, ranging from 0.02 to 0.3, and no

significant posttest differences between the two groups were found on the MacCAT-CA. Their overall results did not support the use of the FG in competency restoration.

Bertman et al. (2003) assigned defendants to (1 of 3) treatment groups for psycholegal competency restoration, and found that all groups showed significant differences between pretest and posttest scores. The authors compared a legal rights education group; a deficit focused remediation group; and a standard hospital treatment group. Overall, treatment groups that included individual sessions fared better than the treatment as usual/standard hospital group. Specifically, the legal right education group and the deficit focused remediation group fared better on posttest scores of competency assessment instruments. However, based on the treatment design, it was not clear whether outcomes were attributable to the variable treatment formats (individual-group vs. group-only intervention) and/or frequency of treatment. Bertman et al. (2003) argued that legal rights education was effective and less resource intensive since they found no significant difference between this intervention and the deficit remediation approach.

The final educational CST restoration approach to use experimental design was Siegel and Elwork (1990). In their study the experimental group received psychoeducation and instruction on legal concepts using video recording and discussion of courtroom procedure. In addition, the experimental group also took part in group problem solving sessions involving an actual legal case. These authors reported greater improvement on the Competency Assessment Instrument scores for the experimental (n=21) compared to the control (n=20) group. They also reported more CST recommendations by hospital staff for the experimental group (45%) compared to the control group (15%).

The remaining two studies on competency restoration treatments did not use random assignment. The first by Brown (1992) described a group based, didactic intervention structured around five different modules: nature of criminal charges; elements of specific charges; roles of participants in the trial process, the sequence of events during the trial process; and the consequences of different legal decisions and outcomes.

Noffsinger (2001) described a revised, multidisciplinary CST restoration approach that compromised seven discrete modules that included different materials, i.e., video recordings of trials, a mock trial, videotaped vignettes, and a written test. The modules included: education; anxiety reduction; a court officer guest lecture; a mock trial; court proceedings video; post-restoration; and legal current events. Noffsinger (2001) reported improvement in the overall length of stay for the new CST restoration model compared to the earlier predominantly didactic program. He also reported competency restoration rates greater than 85% for major felony offenses (and >90% for lesser felonies).

Remediation for Cognitive Disability. Two studies have reported on CST restoration for defendants with developmental disabilities (mental retardation). Anderson and Hewitt (2002) reported on restoration outcomes for MR defendants detained at a habilitation facility compared to those detained at a psychiatric hospital and found better rates for the latter group (50% vs. 18%). The authors contend that the difference between the two groups may be attributable to the greater accessibility to psychiatric medication at the hospital facility. However, Anderson and Hewitt (2002) found that only one-third of their overall sample was restored to competency.

A training program for defendants with mental retardation focused on repeated review to facilitate retention was described by Wall, Krupp, and Guilmette (2003). Their program (*Slater Method*) includes five sequential modules: (a) the purpose of the training, review of the charges, pleas, and potential consequences; (b) courtroom personnel; (c) courtroom proceedings, trial, and plea bargain; (d)communicating with the attorney, giving testimony, and assisting in defense; and (e) tolerating the stress of the proceedings. These modules are presented over a six-month period and can be extended in increments of six-months as required. Wall et al. (2003) reported CST restoration rates consistent with those of Anderson and Hewitt for this group of defendants.

In summary, non-pharmacological competency restoration approaches suggest there is some benefit to educational approaches that augment a defendant's legal knowledge. However, the effectiveness of restoration programs for defendants with mental retardation appears to be limited. An important consideration across all restoration programs involves their cost effectiveness and resource requirements. Standardized, less time and labor intensive are likely to be prioritized. And for this reason, pharmacological intervention often stands first. Over time CST restoration strategies outside of psychotropic medication have evolved from basic instructive approaches to more varied and targeted approaches. Although much research in this area remains to be done the limited available data points to some benefit for adding legal education programs in CST restoration.

Factors Predictive of Restoration

Research on factors that predict successful restoration is not as comprehensive as studies examining factors salient to initial competency status. While the body of research examining predictors of initial CST status has grown steadily since the Supreme Court's judgment in *Dusky* the number of studies investigating restoration of competency have been negligible. The following section reviews a total of 6 studies, summarized in Table 2, in this area.

Table 2

CST Restoration Studies

Authors (N)	Restoration Status	Restoration Factor
Rodenhauser and Khamis (1988)	Adjudicated	Axis I disorder and history of incarceration
Anderson and Hewitt (2002)	Adjudicated	Cognitive disability/lower IQ
Hubbard and Zapf (2003)	Predicted	Age and violent offense
Hubbard et al. (2003)	Predicted	Does not understand legal proceedings
Mossman (2007)	Adjudicated	Major psychotic illness and cognitive disability/MR
Wolber (2008)	Predicted	Cognitive disability/MR

Through archival reviews a number of scholars have identified variables salient to predictions of restoration aside from responsiveness to psychotropic medication (Wolber,

2008; Hubbard & Zapf, 2003; Hubbard et al., 2003). A 2008 survey of multiple forensic mental health facilities and evaluation sites across 45 states indicated that severe cognitive impairment (e.g., dementia or developmental disability) and refractory psychosis were the primary reasons for defendants not being restored to competency (Wolber, 2008). Severe cognitive impairment was the foremost reason for non-restorability reported by 45 facilities in Wolber's telephone survey.

Hubbard and Zapf (2003) found evidence for criminal variables, i.e., violent index offenses and previous criminal history, as predictors of restorability. They found that defendants who were older and had a violent index offense were more likely to be found not restored compared to the younger counterparts who had non-violent index offenses. In addition, Hubbard and Zapf (2003) found defendants with non-psychotic minor disorders, prior mental health contact, prior use of psychotropic medication, and prior criminal histories more likely to be predicted restored. Together psychiatric diagnosis, psychiatric history, criminal history, and violent index offense accounted for 28% of the variance in their model with an accuracy rate of 53% ($p < 0.001$).

A number of state statutes require clinicians to render an opinion regarding the likelihood of restoration once a defendant has been found IST. Alabama statutes in the Hubbard et al. (2003) study similarly required clinicians to report on the likelihood of restoration. Overall, they found defendants predicted restorable were more likely to have a non-psychotic minor diagnosis, a past criminal history, and the ability to understand legal proceedings. In contrast, those predicted non-restorable were more likely to lack understanding of legal proceedings and were older. In the same way, Morris and Parker (2008) also reported that those diagnosed with a mood disorders were more likely to be

restored than defendants diagnosed with a major psychotic disorder (i.e., schizophrenia). Together, these three studies provide data on factors *predictive* of CST restoration.

Some studies, on the other hand, have addressed the question of adjudicated CST restoration outcomes more directly, and consistent with other findings in this area suggest psychiatric variables (e.g., long-standing psychotic disorders with a history of extended prior inpatient hospitalization) and irremediable cognitive disorders are important determinants of non-restorability (Mossman, 2007; Anderson & Hewitt, 2002; Rodenhauser & Khamis, 1988). In an archival review of adjudicated CST restoration outcomes Mossman (2007) found that defendants with a major psychotic disorder (schizophrenia or schizoaffective disorder), mental retardation, extended hospital stays, older age, and misdemeanor offense had a decreased likelihood (<35%) of being adjudicated CST. Anderson and Hewitt (2002) explicitly examined the impact of mental retardation on competency restoration. Those defendants who were restored in their sample had significantly higher IQ scores than those who were not restored, M = 66.91 ($p < 0.01$) vs. M = 57.54 ($p < 0.01$) respectively. Also, these authors found that African American defendants were more likely to be restored than their White counterparts. In a review of 376 defendants who had their restoration status adjudicated Rodenhauser and Khamis (1988) found a number of significant predictors of CST restoration outcomes. Defendants without a major Axis I disorder and no prior history of incarceration were more likely to be adjudicated restored. Overall, the extant literature suggests irremediable cognitive deficits and longstanding psychotic illness are inversely related to CST restoration status while the data on past criminal history and offense type appear more equivocal.

Involuntary Medication and Restoration

In *Harper* (1990) the Supreme Court held that an individual has a "significant constitutionally protected liberty interest in avoiding unwanted administration of antipsychotic drugs" (p.93). Even though the majority of IST defendants consent to drug treatment (Zapf & Roesch, 2011) the constitutional right to refuse treatment has long been upheld by the United States Supreme Court. While courts may consider educational approaches to CST restoration less invasive the use of antipsychotic drugs remains by far the leading method to achieve this goal, The rates of involuntary treatment of pretrial defendants are not well known, but a recent study by Cochrane, Herbel, Reardon, and Lloyd (2012) estimates that 1 in 36,000 federal defendants undergoes such treatment. Moreover, data on rates of medication refusal for pretrial defendants is sparse. In the absence of medication, the condition of a deluded individual would conceivably remain unchanged and it is not uncommon for efforts to medicate to be incorporated into their delusional system (Felthous et al., 2001). Consequently, delusional IST defendants with impaired decisional capacity can go on to proffer seemingly rational reasons for refusing treatment.

Prior to *Sell v. United States* (2003) incompetent pretrial defendants were medicated based on *Washington v. Harper* (1990). Harper, who had been incarcerated in a Washington correctional facility following a parole revocation, contended that he had been denied a hearing to determine possible violation of due process by being forced to take medication. Disagreeing with Harper the Supreme Court ruled that the involuntary administration of antipsychotic medication without a judicial hearing was acceptable in cases of serious mental illness where an inmate posed a danger to himself or others. The

Court further held that such involuntary medication should be in the inmate's medical interest. In many ways *Harper* set the standard for the forcible medication of pretrial detainees. This permissible compromise set out by the Court also extends to instances of grave disability.

Still, avoiding forcible medication is a constitutionally protected interest as reaffirmed by the Supreme Court in *Riggins v. Nevada* (1992). In *Riggins* the Supreme Court explicitly addressed forcible medication of pretrial detainees. In his appeal Riggins argued that the state violated his Sixth and Fourteenth Amendment rights by forcibly medicating him during trial (as he pursued an insanity defense). Mr. Riggins had been convicted for capital murder and was sentenced to death. The Supreme Court granted *certiorari* and later reversed the lower court's decision holding that protections against involuntary medication, absent overriding judicial interests or medical appropriateness, also extend to pretrial detainees (as with inmates in *Harper*). In *Riggins* the Supreme Court held that pretrial defendants had a liberty interest under the Fourteenth Amendment not to be forcibly medicated. The Court further held that Riggins was denied a full and fair trial under the Sixth Amendment based on his argument that the adverse side effects of his (involuntarily administered) antipsychotic medication (thioridazine) impaired his competency during criminal proceedings.

After *Riggins* the landmark Supreme Court case of *Sell v. United States* (2003) sought to elucidate the conditions for involuntary medication, specifically for competency restoration of not yet adjudicated defendants. Charles Sell faced multiple counts of Medicaid and mail fraud, and was ordered to undergo involuntary treatment after the lower court held that he posed a danger to himself and others. Sell, who was

diagnosed with a delusional disorder, appealed the decision of forcible medication by the district court, a decision that the appellate court later affirmed. The Supreme Court, in a 6-to-3 decision, vacated and remanded the appellate decision. The Court held that forcible medication for the sole purpose of competency restoration of a pretrial defendant who is facing serious criminal charges was permissible under certain circumstances.

Therefore, before an order of involuntary medication can be issued, under *Sell* four key factors have to be established. First, to bring a defendant accused of a serious crime to trial the court must find that important governmental/state interests are at stake. Second, the court has to find that forcible medication will significantly further these state interests, and likely render the defendant competent to proceed. The court further has to find that involuntary medication per se (and not another, perhaps less intrusive option) is necessary to further the states interests. Finally, it has to be shown that drug treatment is medically appropriate, and in the patient's best medical interest. Since Sell was not a danger to himself or others the Court subsequently held that he could not be forcibly medicated without consideration of the aforementioned factors.

Upon cursory examination, the first and third prongs in *Sell* appear less fraught with difficulty when confronted with a delusional defendant accused of a violent crime. Governmental interests are generally greater for violent felonies and, as for the third factor, the administration of neuroleptics drugs is widely viewed as the primary mode of treatment for psychotic patients. However, the available data on treatment outcomes for delusional patients and clinical perceptions suggests that factors two and four stipulated in *Sell* may be particularly difficult to navigate.

Firstly, the Supreme Court decision in *Sell* accentuated the importance of the efficacy and side effect profiles of medications that are administered involuntarily in the fourth prong of *Sell.* Even though the side effect profiles for newer antipsychotics are not as troublesome, relatively recent data suggests that the use of first generation antipsychotics remains prevalent in the treatment of delusional disorder (Herbel & Stelmach, 2007). Medication side effects are not only important in terms of a pretrial defendant's ability to assist counsel, but can also influence the trier of fact's perception of a defendant. For example, a defendant's blunted affect during a trial, brought on by his psychotropic medication, could be erroneously interpreted by a jury as a lack of remorse.

More recent cases, such as that of Jared Loughner in Tucson (AR), further demonstrate the complexity of forcibly medicating pretrial defendants who are initially considered non-dangerous while in custody. Loughner was initially able to obtain an injunction against forcible medication after the Ninth Circuit Court found that governmental interests to prevent harm to others was outweighed by his interest to avoid the side effects of involuntary medication. The court argued that Loughner was under custodial care for six months without any injury to anyone. However, this injunction was later lifted by the same court after the government was able to successfully argue that Loughner's deteriorating (and potentially dangerous) mental state posed a danger (to himself). The government argued that antipsychotic medication was the sole method to ameliorate this danger.

In reference to the second *Sell* prong, promoting concomitant governmental interests implies that the medication administered will be substantially likely to restore a pretrial defendant to competency. As noted, being found incompetent to stand trial is not

a clinical condition, but the restoration of incompetent defendants does primarily rest on medical intervention. Consequently, the relatively obscure prognostic profile and the limited outcome data for delusional disorder have the potential to obfuscate any informed judgment about the likelihood of competency restoration for this subset of pretrial detainees.

A number of federal circuit courts have addressed the issue of involuntary medication of delusional pretrial defendants subsequent to *Sell* (e.g., *United States v. Ghane, 2004*; *United States v. Ruiz-Gaxiola, 2010)*. In *Ghane,* a defendant diagnosed with delusional disorder, was found incompetent to stand trial and appealed an order of involuntary medication. Hessam Ghane was facing federal charges for the possession of a chemical weapon (potassium cyanide). The Eight Circuit Court of Appeals held that he could not be medicated involuntarily based on the *substantially likely* (to restore competence; second prong) factor set out in *Sell v. United States* (2003). After reviewing testimony from at least four psychiatrists, the judge concluded that 90% of patients diagnosed with delusional disorder do not improve with treatment and, reversing the district court's decision, ruled that the state had not met the burden for establishing the second *Sell* factor. The psychiatric testimony proffered explained that only a 10% of these patients experience symptom reduction when treated with psychotropic medication – a scenario where restoration to competency is improbable.

Similarly, consider the case of Ruiz-Gaxiola where the Ninth Circuit Court of Appeals reversed the trial court’s decision on forcible medication. Ruiz-Gaxiola, who had an extensive criminal history and had entered the United States illegally, was diagnosed with delusional disorder and sent to a Federal Medical Center (FMC) after being found

IST. The court ruled, based primarily on defense expert testimony about the refractory nature of the defendant's clinical disorder, that involuntary medication for Ruiz-Gaxiola was medically inappropriate (more so as he posed no danger to himself or others, as per *Harper*, in the FMC).

Common to both cases and *Sell* is the defendants' diagnosis (delusional disorder) and one can recognize the weight accorded to the different *Sell* factors due in large part to expert testimony proffered on the reputed prognostic profile of the disorder. Thus, the contention previously highlighted in the psychiatric nosology around the prognosis of delusional disorder can also inform forensic opinions albeit that subtle facts and evidence surrounding each case supports the individual courts' decisions. Taken together, the circumstances for forcibly medicating an incompetent pretrial defendant as set out *Sell* are not by any means straightforward.

Delusional Disorder and Restoration Outcomes

Within the context of the high base rate for restorability, Zapf and Roesch (2009) note that the accurate identification of poor treatment responses holds the greatest heuristic value, and further stress that the overall predictive accuracy of mental health professionals in this area is low. Few defendants who are evaluated for CST are found incompetent and even fewer of those are judged non-restorable. For defendants with delusional disorder the dearth of empirical studies on treatment outcome rates further compounds the probability of false positives (non-responders predicted to be restorable).

Relatively recent contributions such as those by Felthous et al. (2001) draw on existing clinical literature in their discussion of defendants with delusional disorder. From

their brief review of pharmacotherapy with persecutory delusions these authors make the argument that atypical antipsychotics may be more favorable in the treatment of delusions given their efficacy in thought disorders. In addition, they contend that mood stabilizing agents may help curb the impulse to act in delusional patients (Felthous et al., 2001). They ultimately argue for an approach that strikes a balance between patient autonomy and treatment standards in the forensic setting. The review by Felthous and colleagues also illustrates how the lack of clinical outcome data for delusional patients can provide fertile ground for treatment refusal based on seemingly rational arguments. Defendants (as with clinical patients) often provide a network of spurious evidence to support their inferences where efforts to medicate are duly incorporated into the delusional system.

To date there have only been two published studies directly investigating competency restoration for defendants diagnosed with delusional disorder. In a retrospective review of 22 pretrial federal cases of defendants who had undergone involuntary medication hearings from 1990-2003, Herbel and Stelmach (2007) found evidence of favorable treatment responses to a range of antipsychotic medications. The majority of defendants in their sample (n = 16) suffered persecutory delusions, and close to 60% of those defendants restored to competency were treated with a single typical antipsychotic. In addition, all of the defendants in their sample showed a favorable response to treatment after a minimum of three uninterrupted months of treatment, and approximately 77% were considered restored to competence. Although the sample size for this study was small the results open interesting avenues for future investigation, not only regarding the restorability of pretrial DD defendants, but also whether *specific*

delusional themes (e.g., persecutory themes involving governmental conspiracy) differentially impact responsiveness to treatment.

A subsequent study by Cochrane et al. (2012) examined the rates and outcomes for federal felony defendants who had undergone treatment under the *Sell* criteria. Forty-four defendants in their overall sample (N = 287) were diagnosed with DD and of those 15 were granted an order of involuntarily treatment. The majority (73%) of those DD defendants treated under *Sell* were restored to competency.

While these studies serve to advance our knowledge of treatment outcomes in forensic settings for defendants diagnosed with DD their respective authors highlight a number of methodological shortcomings. Aside from the standard limitations that plague retrospective analysis, they also point to the small number of DD cases in their samples. Notwithstanding, their findings are instructive and assist in orienting future studies, more so when one considers the tentative argument that the forensic setting facilitates greater adherence to medication trials, which, in turn, may show less than expected positive CST restoration (and perhaps clinical) outcomes for defendants diagnosed with DD.

Rationale

Treatment outcome data for IST defendants with DD, and (more broadly) their clinical counterparts, is severely limited. Notwithstanding, delusional ideation has been broadly recognized as common to a number of psychotic disorders. Scholars have reported prevalence rates between 10-15% for delusional ideation in non-clinical populations (Freeman, 2006) and the recent de-emphasis on bizarreness in DSM-V points to a likely increase in DD prevalence rates. However, the treatment of delusional disorder

continues to lag behind partly due to low prevalence rates and the perception that this illness is intractable. However, recent findings suggest that the course of the disorder is variable, and that treatment often includes a broad spectrum of psychotropic drugs. Similar perspectives and trends have been noted in forensic settings where minimal data is available to guide standards of care for delusional, incompetent pretrial defendants. Although the majority of defendants who are ruled IST suffer psychotic symptoms the base rate for those with delusional disorder within this group is low, further limiting efforts to study and treat this particular population. And, while the existing judicial standard explicates guidelines for involuntary medication of IST defendants, numerous questions are left unanswered, not merely as a result of the wording of the *Sell* standard, but because of a clinical condition (DD) with no established treatment protocol and a disputed prognostic profile. In the absence of data on treatment outcomes these defendants face the prospect of protracted criminal commitment (Felthous et al., 2001)[5]. A primary goal of the proposed study was to further our clinical understanding of treatment efforts within the context of competency restoration as well as offer some insight into existing forensic dispositions for DD IST defendants.

Some researchers in the area make the finer diagnostic distinction between psychotic disorders, and argue that the trial period (and therefore time to restorability) for treating DD in forensic samples exceeds that for schizophrenia (Herbel & Stelmach, 2007). In the same way, clinical trials with DD cases have been criticized for their relatively short treatment duration (see for example Silva et al., 1998). However, current

[5] Cf. *Sell v. United States* (2003) where the court suggests that lengthy confinement stemming from medication refusal negates the risks associated with the release of a criminal defendant

empirical data shows that the overwhelming majority of IST defendants receiving inpatient treatment are restored within the statutory time frame (Zapf & Roesch, 2009). Whether or not this particular conclusion holds true for DD defendants found incompetent to proceed remains unclear. And so, another aim of the current study was to exam whether the majority of DD pretrial defendants referred for restoration are indeed restorable within an initial statutory timeframe (as with their other IST counterparts).

So, while not synonymous with clinical recovery, restoration of competency in forensic settings for DD defendants should provide adequate trial periods for treatment. Still, whether such outcomes are equally robust for purportedly intractable psychotic disorders such as delusional disorder is not clear.

Further, the financial burden and time associated with adjudicative competence is well documented (Golding, 1992) and the high base rate for competency restoration suggests that the accurate identification of poor responses to treatment holds superior heuristic value (Zapf & Roesch, 2009). More especially, most defendants found IST and unlikely to be restored are housed in costly forensic mental health facilities. As a result, identification of symptoms that contribute to decreased restorability could more readily facilitate timely placement planning and intervention in less cost intensive settings, such as transitional living facilities (TLF) or outpatient treatment centers.

Previous studies have predominantly focused on the relationship between broad psychiatric diagnosis and CST abilities. In their review of the CST restoration literature, Zapf and Roesch (2011) identified three salient factors common to non-restored defendants: a diagnosis of mental retardation, older age, and a diagnosis of psychotic disorder. These (and other) authors argue that a reliance on diagnostic classification and

the oversimplification of competency as a construct precludes a more detailed understanding of how specific symptoms impact competency related abilities (Jacobs, Ryba, & Zapf, 2008; Zapf & Roesch, 2011). More specifically, Zapf and Roesch note, "[I]nformation regarding specific symptoms and specific competency related abilities…would be more useful" (p. 44). A more circumscribed focus on symptoms may therefore offer more reliable data rather than targeting diagnostic categories. So, not only have few studies focused on CST restoration (compared to initial CST findings), but fewer still have investigated the role of specific symptoms on CST abilities and related restoration outcomes. The current study aimed to contribute to this avenue of research.

Finally, while the use of medication to treat IST defendants remains commonplace, questions regarding the suitability of such treatment and the rates at which delusional defendants accept or refuse treatment are not well well understood.

Research Questions

The primary questions to be posed in the current study can be formulated as follow:

Q_1: What proportion of defendants with psychotic symptoms, remanded for competency restoration, suffer with DD?

Q_2: What is the competency restoration rate for defendants with DD, absent other psychotic and affective symptoms, after a single, statutorily determined (120 day) period of treatment at the FMC?

Q_3: Is there a difference in the rates of competency restoration between defendants with DD (absent other psychotic and affective symptoms), and defendants with other psychotic symptoms after a single CST restoration period/study period[6].

Q_4: Is the average length of stay (LOS) for DD IST defendants different from that of IST defendants with other psychotic symptoms for a preliminary 120 day restoration period?

Q_5: Do the dimensional ratings of action and pervasiveness of delusions impact restorability?

Q_6: Does impairment of specific competency related abilities differ for DD defendants compared to defendants suffering other psychotic symptoms?

Q_7: What study variables are the best predictor of restorability?

[6] The terms *restoration period*, *study period*, and *period of evaluation and treatment* are used interchangeably throughout.

Chapter Three

Method

This primary goal of the present study was to investigate the competency restoration rates of IST defendants with DD and contrast this group with defendants who exhibit other psychotic symptoms. More specifically, the study also identified how specific psychotic symptoms impact competency related abilities. In this section, a methodological account of the study is provided, including an overview of relevant ethical concerns.

Sample Demographics. The majority of the all-male defendants in the current sample (N = 201) were either White (36%) or Hispanic (35%) followed by African American (22%). The remainder of the sample included defendants of Asian (4), African (3), Caribbean, Middle Eastern (3), and Native American (1) descent with an overall mean age of 42.26 (SD = 10.71). The mean level of education for the 201 men in the sample was 9.72 years (SD = 3.26) and of the 158 with data on employment status 132 (83.5%) were unemployed at the time of arrest. Data were also available on the employment history of 108 men and the occupational categories are listed in Table 3 below. Most men were not married (55%) while the rest were either divorced or separated (35%), married (8%), or widowed (2%). A total of 154 cases had data on prior convictions and/or arrests, and 79% of defendants had a prior conviction and/or arrest. The proportion of violent prior offenses for those defendants with a criminal history was 48%.

Table 3

Defendant Employment Categories by History

Occupational Classification	n	%
Agricultural/Landscaping	14	13.0
Construction/Manual labor	30	27.8
Fast food/Counter work	16	14.8
Administrative/Clerical	14	13.0
Technical/Skilled labor	13	12.0
Professional	3	2.8
Mostly Unemployed	12	11.1
Other[a]	6	5.6

N = 201, [a]Self employed

In terms of current criminal charges the most common were illegal re-entry, firearms, and substance related offenses. Index offenses for the defendants in the sample are listed in Table 4. Nine defendants (4.5%) had an additional index offense in a different category. The 11 index offenses listed under "Other" included crimes involving arson, destruction of property, conspiracy, and conveying false information.

Table 4

Current Index Offenses for CST Restoration Defendants

Index Offense	n (%)	Add. Index Offense (n)
Murder/Attempted Murder	4 (2.0)	
Sex Offense	14 (7.0)	
Assault	23 (11.4)	
Firearms/Weapons	32 (15.9)	2
Robbery	9 (4.5)	2
Illegal Re-entry	46 (22.9)	
Substance Related	27 (13.4)	1
Fraud	14 (7.0)	
Threats to Injure/Kill	21 (10.4)	2
Other	11 (5.5)	2

N = 201

Procedure

The current study was approved by the Bureau of Prisons Research Review Board (BRRB), which oversees institutional research at the Federal Medical Center (FMC) in Butner. An archival review of cases remanded for competency restoration to FMC (Butner) by the court pursuant to Title 18 USC §4241(d) were reviewed. The five (5) year time period covered was from 2009-2013. The proceedings for section 4241 are described in Appendix B. The forensic team responsible for the 4241(d) treatment and evaluation reports include a primary evaluator, i.e., a staff psychologist or psychiatrist

along with either psychiatric or psychological consultation respectively. Data and feedback from correctional, medical, and mental health staff is also incorporated into the competency restoration process. The forensic assessments data from these files included clinical interviews, reviews of medicolegal and index offense data, observations by BOP staff members, psychological testing, and other collateral data. All IST cases, including those involving involuntary treatment were included

FMC Butner admission summary data indicates that the average annual number of 4241(d) referrals alone is close to 240 (Dr. Edward Landis, personal communication, 2015). Most defendants referred for restoration at the FMC are treated with psychotropic medication. In addition, defendants are also have the opportunity to participate in a once weekly Competency Restoration Class. Individual cognitive behavioral therapy is also offered to defendants where appropriate. All forensic evaluations were completed by licensed clinicians (psychologists and psychiatrists) within the inpatient FMC setting. Federal statutes require that evaluations and treatment be completed within a period of four months.

Preliminary Case Selection. Research on CST and particularly competency restoration has shown that most defendants adjudicated IST suffer with psychotic symptoms. A directory search was conducted of all 4241(d) or CST restoration cases for the calendar years 2009 to 2013. Cases were identified by a BOP health systems specialist using the following search terms: *psychosis, psychotic, psychotic feature*, delusions, paranoi*, schizo*, mood with, depression,* and *bipolar*. Approximately 25% of cases were sampled from each of the five calendar years spanning from 2009 to 2013. Consecutive alphabetical cases were drawn from each year with alternate years running

in reverse order (from the letter "Z" upwards). All cases were de-identified by the health systems specialist prior to coding. After initial selection cases were coded for psycholegal variables and symptoms were scored using the extended 24-item version of the Brief Psychiatric Rating Scale/BPRS (Lukoff, Nuechterlein, & Ventura, 1986) and ultimately divided into 3 subgroups based on BPRS scores. Cases were also coded for comorbid cognitive disability/mental retardation and substance disorder. In order to detect a medium effects size (*ES*=.15) for α=.05 and up to five predictors in the model Cohen (1992) suggests a sample size of N≥182.

Exclusions. Adjudicative competence speaks to present ability; thus, it is a dynamic construct that includes the potential for fluctuation in a defendant's competency related abilities. Therefore, to rule out multiple observations of any one defendant/case, all cases where a defendant's psychiatric condition deteriorated (for example, due to non-adherence to the prescribed medication) resulting in a return to the FMC were excluded. In addition, all cases with a documented history of body dysmorphic disorder, paranoid personality disorder, and obsessive compulsive disorder were excluded. Cases where concerns about potential malingering were raised during and/or upon conclusion of the 4-month restoration period were also excluded. Further exclusions were cases with a documented and/or diagnosed cognitive disorder, and/or documented traumatic brain injury (TBI), and/or dementia. Although specific psychiatric symptoms and subsequent classification of DD were the focus of this study data on differential diagnosis was also recorded at the end of the coding protocol in order to identify the aforementioned exclusion categories. Clinicians used DSM-IV-TR for diagnostic coding for the time period covered by the current study.

Data Coding. Study data included socio-demographic, psycholegal, and psychiatric symptom (BPRS) variables coded from the case files of pretrial defendants remanded for CST restoration. Appendix A lists the key variables coded for the study. In collaboration with administrative staff at the FMC relevant cases were identified and then coded by the principal investigator (PI). Approximately 10% of the cases[7] were randomly selected to assess interrater reliability. To facilitate this process a staff psychologist (KB) underwent training on the coding manual, which included instruction on the archival use of the BPRS, and this rater (KB) has extensive experience with the data contained in the forensic/4241(d) reports as well as the CST abilities outlined in the coding manual.

Interrater Reliability

Raters reviewed two reports in each cluster of twenty to identify coding problems and disagreements. Percent agreements were calculated for all data points except for the BPRS and dimensional ratings of delusions. Rater agreement was >97%, and discrepant scoring was for a single item (*date in custody*), coded as missing by KB, but recorded from collateral data by the principal investigator. Subsequent cases were revised accordingly.

Weighted Kappa coefficients were calculated for the BPRS ratings. The following weights were assigned for absolute differences in scoring on the expanded 24-item BPRS: 1 = full agreement, partial agreement .75 = |1|, .50 = |2|, .25 = |3|, and no

[7] A case refers to a study period and not a defendant who may (or may not) have had multiple court-ordered studies for the same index offense.

agreement 0 = |4|, as well as 0 = presence vs. absence and/or one rater ≥4 and the other <4. Coding for the BPRS showed good interrater reliability with Kappa = .67. This coefficient was somewhat lower than previous interrater reliability data for archival use of the BPRS, however, the latter were interclass correlations (Adachi et al., 2000) based on the sum of rater scores.

Simple Kappa coefficients were calculated for dimensional ratings of delusions, and yielded substantial agreement, Kappa = .775, $p < .05$. The latter coefficient supports the notion that the dimensional constructs of *action* and *pervasiveness* are amenable to archival review.

Variables included in the structured coding protocol included both categorical and continuous data, and where numeric values were not assigned data were entered as string. Instances where variable information was incomplete/missing/unknown were recorded as =99 (or -9 as applicable).

Outcomes regarding competency restoration were based on the conclusions of forensic evaluators (rather than clinical ratings of recovery)[8], and specific competency related abilities that were impaired upon admission to the FMC were also coded. The broad designations of rational and factual understanding, and ability to relate to defense counsel as set out in *Dusky* can render the coding of CST abilities somewhat vague. Skeem et al. (1998) identified 11 global psycholegal domains to address this shortcoming in the coding structure of CST reports. The functional abilities identified by these authors (see Table 5) help to elucidate the language captured in *Dusky*. Accordingly, CST

[8] Previous reviews typically rated recovery on a continuum (Manschrek & Khan, 2006; Munro & Mok, 1995)

abilities were coded as they appeared (string) within the initial CST evaluations. Finally, for cases where a defendant was charged with multiple offenses only the most serious charge was applied in subsequent analysis. Based on the judgments of forensic evaluators cases were coded for restoration status (0=not restored and 1=restored) after a 120 day period.

Table 5

*Competency Domains**

Capacity to participate in trial
Capacity to testify relevantly
Capacity to understand the adversary nature of proceedings
Capacity to disclose relevant information to counsel
Basic knowledge of legal strategies and options
Relationship with counsel
Capacity for reasoned choice among options
Capacity for reasoned choice among options
Capacity to behave appropriately in court
Capacity to appreciate charges
Capacity to appreciate potential penalties
Medication effects on CST

* Listed by Skeem et al. (1998)

Dimensions of Delusions. Two variables from the MacArthur-Maudsley Assessment of Delusions Schedule (Appelbaum et al., 1999), which provide a non-content based, dimensional perspective of delusions were included in the coding manual.

These are *pervasiveness* and *action* – the two dimensions most amenable to retrospective analysis from the MacArthur study. *Pervasiveness* refers to the degree to which the delusional belief penetrates into areas of the defendant's life, and is scored on a four point scale ranging from *not at all* to *virtually all* experiences as related to the delusional conviction/ belief (range 0-3). *Action* refers to the extent to which the defendant's index offense was motivated by the delusional belief, and ranges from 0-5, i.e., no actions, to nonaggressive actions only, aggressive thoughts, aggressive acts without injury to victim, aggressive acts with unknown injury to victim, and finally to violence with injury or use of weapons Using the MacArthur-Maudsley Delusions Assessment Schedule (a modified version of the Maudsley Delusions Assessment Schedule), Appelbaum et al. (1999) found support for a two-factor structure in a dimensional assessment of delusions. Data from 328 psychiatric inpatients in the multisite MacArthur Violence Risk Assessment Study revealed a two factor solution, which they labeled intensity/scope and affect/action respectively. This solution showed consistency, independent of diagnosis, in a sample where 71% of the delusional patients were schizophrenic and more than 10% suffered a mood disorder, and accounted for more than two-thirds of the variance (Appelbaum et al., 1999) in their model.

Brief Psychiatric Rating Scale **(***BPRS***)**. The 24-item BPRS (Expanded Version) was developed to assess change in psychiatric symptoms over time within a treatment context (Lukoff et al., 1986). Scores on the BPRS are rated on a 0 (not assessed) to 7 (extremely severe) scale, (see Appendix B adapted from Lukoff et al., 1986). The BPRS has been widely used across a range of settings and application of the instrument is relatively uncomplicated with investigators reporting excellent interrater reliability scores

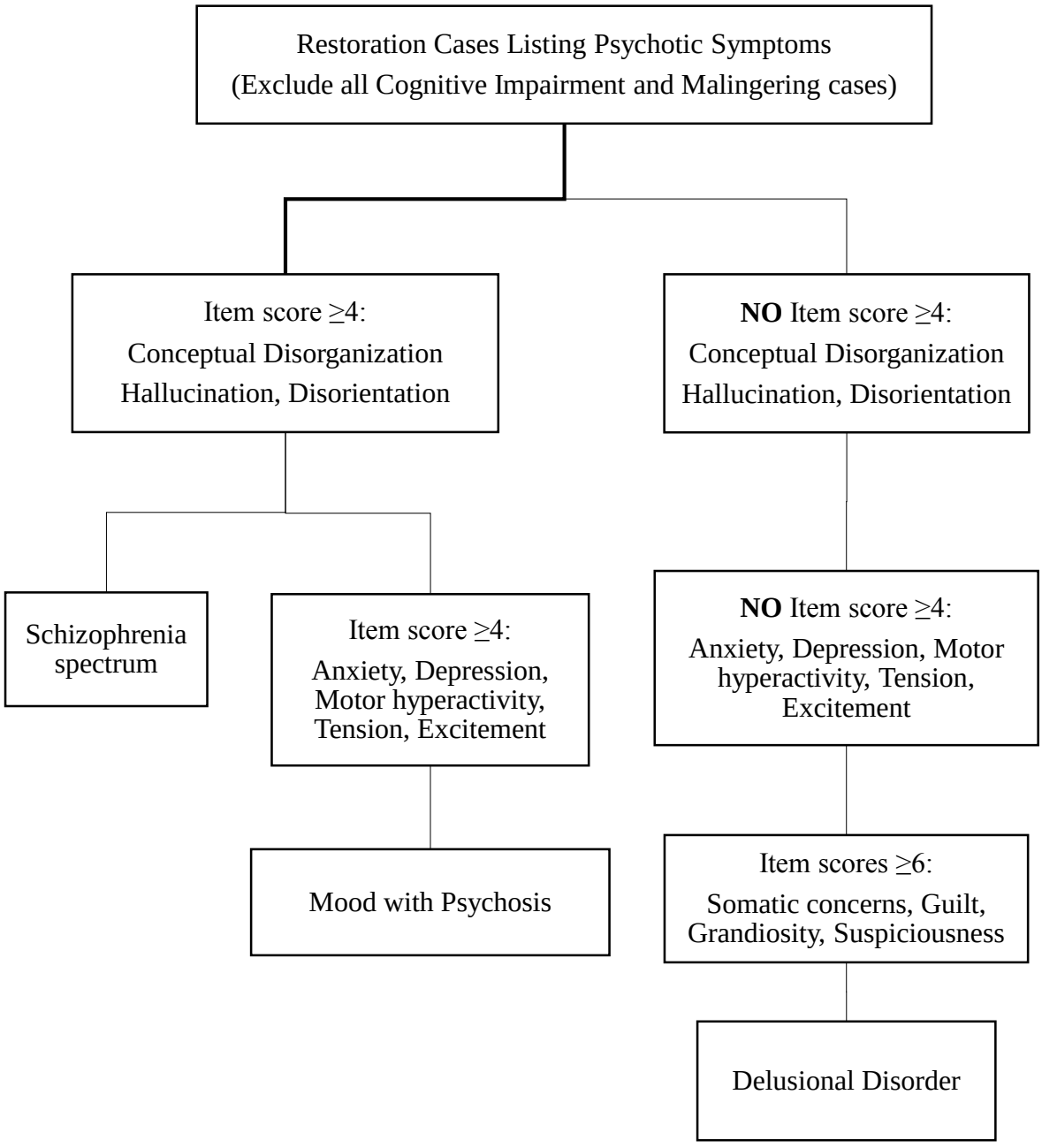
(Lachar et al., 2001). Factor analytic research using the expanded BPRS in forensic settings has identified five subscales or symptom clusters: Psychoticism; Thought Disorder; Depression; Mania; and Withdrawal (Jacobs, Ryba, & Zapf, 2008). Further, CST research with the BPRS has shown that the Psychoticism cluster is most strongly associated with IST findings (Jacobs et al., 2008). Although not ideal for retrospective coding using the BPRS to empirically review archival data has been established in the literature (Adachi et al., 2000; Mullins, Pfefferbaum, Schultz, & Overall, 1986).

First, all cases with documented psychotic symptoms upon admission to the FMC pursuant to a remand for CST restoration were included for analysis. BPRS data were coded from the admission data contained within the forensic reports. To minimize rater bias, BPRS data was coded prior to extracting data on comorbidity in the differential diagnosis section.

To be classified as DD relevant BPRS items, i.e., 1 (somatic concerns), 5 (guilt), 8 (grandiosity), and 9 (suspiciousness) were content coded to identify delusional disorder cases. BPRS scoring requires that DD cases have a score of ≥6 on the aforementioned items. In addition to identifying delusional content for items 1, 5, 8, and 9, DD case classification required: ≤2 on any Psychoticism cluster items, ≤2 on item 12 (Thought Disorder cluster), and ≤3 on any Depression, Mania and/or Withdrawal cluster item. The decision chart for the different group (DD, schizophrenia, and mood disorder with psychotic features) assignments is outlined in Figure 1. Consistent with BPRS coding items were coded 'N/A" when relevant clinical data was not documented for the specified period within the 4241(d) report.

Figure 1

BPRS Classification of Three Clinical Groups



Although the distinction between bizarre and nonbizarre delusions to differentiate between DD and schizophrenia is no longer salient in the current diagnostic nosology this distinction has been retained as a *specifier* in DSM-V. Accordingly, delusional content on any of the DD items was coded as nonbizarre or bizarre, and items 5, 8, and 9 on BPRS were reviewed to determine the bizarreness of the delusional content (if present).

***Statistical Analysis*.** First, descriptive statistics for the study variables are reported followed by independent samples *t* tests and nonparametric comparisons for different groups. Logistic regression was utilized to determine the study variables predictive of restoration outcomes (0=not restored; 1=restored). The preference for logistic regression is based on its more flexible assumptions and types of data open to analysis. Logistic regression also facilitates both categorical and continuous variables, the predictors do not have to be normally distributed or have a linear relationship, and are not required to have equal variance within each group (Tabachnick & Fidell, 2007). Model predictors were assessed for univariate outliers and multicollinearity, and goodness-of-fit tests together with relevant model fit indices were reported. The Wald statistic was used to report the significance of individual coefficients. Preference was accorded to those predictor variables with an empirical basis in the determination of initial CST status and restoration, as well as those variables with a significance level of $\alpha \leq 0.5$ were retained in the model assessment.

Ethical Concerns and Data Protection. All identifying information about defendants (or their alleged victims) was anonymized. Identifying data were removed from the research database. No data from the FMC files was copied, and links to identifiable data were retained at the FMC. These links were destroyed once study data had been fully analyzed. Anonymized, coded data were stored in a secure facility at John Jay College and all electronic documents related to the study were encrypted and password protected. All data from this study will be destroyed in accordance with federal law, American Psychological Association (APA) standards, and university (CUNY) policies. The principal investigator completed training on the federally required Human Subjects Protection Education Program/Collaborative Institutional Training Initiative (CITI).

Chapter Four

Results

This chapter provides descriptive statistics for psycholegal and clinical variables followed by an examination of group means, and were applicable results from non-parametric analysis such as Chi-square tests of independence are presented. Finally, logistic regression results are outlined for the criterion variable, i.e., CST status. All data were analyzed using Statistical Package for the Social Sciences (SPSS), version 22.

Data Characteristics

The reports by forensic evaluators were comprehensive and structured to include identifying data for the case, procedures administered, background information, and the course of treatment and evaluation while at the FMC. A wide range of sources comprised the collateral information reviewed in the forensic reports. An example, but by no means an exhaustive list includes: data from the criminal complaint, prior CST evaluations, transcripts from court proceedings, law enforcement reports, correspondence with the Assistant United States Attorney (AUSA) and defense counsel, interviews with family members and previous treatment providers, and existing medical records.

Data on the defendants' institutional progress was similarly detailed and included a discrete mental status examination upon admission, clinical interviews and observations, a physical examination along with admission laboratory tests, and relevant clinical-forensic assessments.

These assessments included data from standardized measures such as the Examination of Competency to Stand Trial - Revised (ECST-R), the MacArthur

Competency Assessment Test - CA), and the Revised Competency Assessment Instrument (R-CAI). Data from malingering and feigning instruments such the Test of Memory Malingering (TOMM), Structured Interview of R Symptoms (SIRS), and the Validity Profile Indicator (VPI) was included were indicated. Finally, numerous data from cognitive, personality, and symptom profile measures were also included.

A total of 232 individual competency restoration cases pursuant to Title 18 Section 4241(d) were reviewed for the current study. Competency to stand trial once restored is not an immutable state and consequently new 4241(d) referrals for the same defendant are to be expected. Cases where defendants were transported from the FMC by US Marshalls after completion of a treatment and evaluation period, and then subsequently returned pursuant to Title 18 U.S.C. Section 4241(d) were excluded. These subsequent forensic reports provided data on a second or later evaluation and treatment periods, and were excluded regardless of the time difference between 4241(d) designations. These cases were readily identifiable as prior court ordered four month evaluation and treatment periods at the FMC were clearly outlined in the forensic reports. For status reports, typically court ordered updates after every 30 days, the initial report was coded and the final status report provided data on restoration outcomes. Once all re-admissions were excluded N = 201 cases were available for analysis. Importantly, not all data in the current study coded as ‘missing’ was absent, but rather absent only from the 4241(d) report as evaluators would routinely reference separate reports. Access to this additional data was limited by the scope outlined in the BRRB research approval.

Legal Variables

Offense History. In addition to the previously outlined index offense data previous convictions and/or arrests and whether or not these past offenses were violent were also coded. Data were available on 154 cases regarding prior offending and for 122 cases a determination could be made as to whether the offenses were violent or not. Designation of a violent criminal past was limited to interpersonal contact offenses involving aggressive acts. The overwhelming majority (79.2%) of defendants had a prior record of arrest and/or conviction and in close to half (48.8%) of these cases the previous offenses were of a violent nature.

Time Spent in Custody. A myriad of factors, some more foreseeable than others (for example, the complexity of a case), add to time spent on pretrial proceedings. Data was screened for outliers[9] in order to determine the average time defendants spent in custody prior to admission for CST restoration. The mean number of days defendants spent in custody preceding admission for competency restoration was 289.7 (SD = 189.8) days or approximately 9.5 months. When a defendant was charged while in a custodial setting the date of that specific instant offense was recorded as the *date in custody*. Arrests for violations of supervised release was recorded as *date in custody*, independent of the arrest date for the original index offense.

Length of Stay/Admission (LOS). Upon conclusion of a court ordered competency restoration period defendants are transferred back to the referring district by US Marshalls. However, there are circumstances when a defendant may remain at the FMC, for example, by court order or instances where their continued psychiatric stability

[9] Using outlier labeling (Hoaglin, Iglewicz, & Tukey, 1986)

may be compromised by a return to a county jail or other contract facility. The mean length of stay (LOS) for a first study was 107.9 days (SD = 34) and there was no significant difference between the LOS means for those defendants ultimately found competent (M = 108.6, SD = 3.2) and those who were opined IST (M= 107.2, SD = 3.5) by clinical evaluators.

CST Related Abilities

The forensic reports reviewed typically gave a brief course of the circumstances and related clinical forensic evaluations leading up to the current FMC admission, wherefrom impairments in CST abilities at the start of the competency restoration period were coded. There were data referencing impairment in competency related ability contained in the majority (92%, n = 185) of the reports/cases. However, most reports (57.8%) stipulated a broad Dusky-based statement regarding a defendant's IST status upon admission. In an additional 16.2% of cases a defendant's *ability to disclose relevant information to counsel* was highlighted followed by problems with their *relationship with counsel* (5.9%), their *ability to behave appropriately in court* (4.9%), and their *ability to appreciate the charges against them* (4.9%). For those cases where the defendant's relationship with counsel was mentioned "paranoia towards counsel" and "contempt for counsel" were some of the phrases noted. Examples of defendants' inability to disclose relevant information were often mentioned in the context of a defendant's disorganized speech and/or interpersonal withdrawal. A lack of appreciation of charges typically included references to a defendant's insistence that they had not broken any law(s)

regardless of their actual offense behavior/actions. All other frequencies for the 11 psycholegal domains listed by Skeem et al. (1998) were ≤5.

Given the limited number of cases across the 11 different domains no further analysis between groups was conducted for CST abilities. However, the two variables, *ability to disclose relevant information to counsel* and *relationship with counsel* were combined to form a composite variable, i.e., interaction with counsel (n = 41). Only 1 in every 3 cases where a defendant had a disrupted interaction with counsel was ultimately opined restored after four months.

CLINICAL VARIABLES and DELUSIONS

Previous Psychiatric Treatment. There was information on prior hospitalization and/or psychiatric treatment, excluding any custodial psychiatric treatment related to the current index offense, for n = 185 cases. Approximately a third of all defendants (66.5%) had a documented history of past psychiatric treatment.

Comorbid Conditions. Forty five percent of defendants were diagnosed with either a post-study comorbid personality (n = 24), substance abuse/dependence (n = 63), and/or cognitive disorder[10] (n = 13). The latter group comprised seven cases of mental retardation, four traumatic brain injury, and two cases of dementia. Most (±70%) of the defendants suffering with cognitive disorders were found unfit to proceed and only 1 in 5 was considered likely to be restorable by forensic evaluators.

[10] Cases of mental retardation, cognitive impairment secondary to a medical condition or traumatic brain injury were grouped together.

The majority of defendants (68.2%) with a comorbid substance abuse/dependence disorder had a history of abusing two or more substances. These were predominantly a combination of alcohol, cannabis, cocaine, and/or methamphetamines. Approximately 1 in every 10 had a comorbid personality disorder and these included antisocial (n = 11), narcissistic (n = 4), and borderline (n = 3) personality disorders. Nine cases had a differential diagnosis of malingering or rule out thereof upon completion of the four month study, and two thirds of these cases were opined restored by forensic evaluators.

Delusions and Clinical Subgroups

The principle source of data for the symptom profiles gleaned from the BPRS were gathered from the initial clinical assessment of the defendant upon their arrival at the FMC. The course of the initial evaluation comprises a clinical interview by the primary forensic evaluator subsequent to the defendant's arrival at the Mental Health Department of the FMC and this is followed by the forensic team's assessment once the defendant is transferred to an appropriate unit. This clinical data often included dates of interviews alongside relevant incidents and observations. The coding of relevant BPRS data was limited to the mental status examination upon admission and these initial evaluations of the CST restoration period.

A number of cases were excluded from subsequent analysis. Mental status data for two cases were not independently outlined at intake, but interspersed with the rest of the evaluation and treatment data, and were thus excluded from subsequent analysis. The aforementioned cognitive disorder and malingering (including rule outs) cases, and cases that did not reach the symptom cutoffs on the BPRS. The latter category included cases

with minimal to no psychotic symptomatology as well as mood disturbances without psychotic features.

Using BPRS cut scores a composite score for positive psychotic symptoms was calculated from the following items: *somatic concerns, guilt, grandiosity, suspiciousness, unusual thought content, hallucinations,* and *conceptual disorganization*. Based on this score the proportion of defendants who met the cutoff for positive psychotic symptoms in the sample was 79.6%. Overall, more than half (58%) of defendants experienced one or more subtype(s) of delusions. Persecutory delusions (64.3%) were by far the most prevalent delusional subtype followed by the grandiose (29.4%), somatic (5.4%), and one case of erotomanic delusions respectively. Of the defendants who met the symptoms threshold for psychosis 28.7% were classified as delusional, 38.9% schizophrenia spectrum, and 21.2% mood with psychotic symptoms respectively. Together these three groups comprised 70.1% (n = 141) of the entire sample.

Dimensional Rating of Delusions. Results for the continuous *action* and *pervasiveness* variables showed that most offense behaviors for delusional defendants were unrelated to the index offense (44%). For those cases where delusions were connected to *actions,* i.e., the index offense, 22% involved aggressive acts without injuries to others followed by 19% of nonaggressive actions and 15% of aggressive actions resulting in injury and/or with the use of weapon. In terms of the pervasiveness of delusional ideation most defendants (46%) had *numerous* areas of their daily lives impacted as opposed to *virtually all*, *not at all,* or *some* areas of functioning.

A comparison of delusions and their dimensional ratings across all three clinical subgroups is presented in Table 6. Approximately a third (30.9%) of defendants in the

delusional subgroup had mixed delusions, and of these the predominant combination (83.3%) was persecutory with concurrent grandiose delusions.

Table 6

Prevalence (%) of Delusions and Dimensional Ratings across Clinical Groups[a]

	Delusional	*Schizophrenia*	*Mood with Psychosis*
Subtype[b]			
Persecutory	89.1	40.0	65.7
Grandiose	39.1	26.6	20.0
Somatic	__	6.6	11.4
Dimensional Rating			
Action[c]	1.56 (1.06)*	1.00 (1.27)	.44 (0.75)*
Pervasiveness[c]	2.07 (0.69)**	1.45 (0.81)	1.22 (0.89)

[a] Combined N = 141; [b] Proportion within group; [c] Mean score (SD); $p \leq .05$; $p \leq .005$

The dimensional rating of *action* (dependent variable) showed a statistically significant difference across the three groups, $F(2, 101) = 9.44$, $p < .005$. Post hoc Tukey HSD contrasts indicated that the index offenses (*actions* leading up to arrest, M = 1.56, SD = 1.06) of delusional defendants were more likely to be associated with their delusional ideation compared to defendants suffering a mood disorder with psychosis (M = 0.44, SD = 0.75), but not more likely when compared with defendants suffering schizophrenia spectrum symptoms. As a dependent variable *pervasiveness* showed a statistically significant difference across the three groups, $F(2, 100) = 11.42$, $p < .005$, indicating that delusional defendants (M = 2.07, SD = 0.69) were more likely than the

other two groups [schizophrenic spectrum (M = 1.45, SD = 0.81), and mood with psychosis, (M = 1.22, SD = 0.89)] to have a greater proportion of their daily lives impacted by delusional beliefs. Examples of the delusional content contributing to the higher scores on dimensional ratings for those in the delusional subgroup included cases of illegal re-entry compelled by the erroneous nonbizarre belief of being on a secret governmental mission, and a case where a defendant makes a border crossing without any effort to evade detection in the (false) hope of pursuing a love interest with a high ranking BOP official whom he met during a prior period of incarceration.

Subgroups and Study Variables. Table 7 provides a comparison of the three groups in terms of key study variables. There were significant differences for age and clinical group, $F(2, 140) = 3.93$, $p \leq 0.05$, and for education and clinical group $F(2, 105) = 20.58$, $p \leq .005$.Tukey HSD post hoc contrasts indicated that delusional defendants were older (M = 45.85, SD = 9.95) compared to those in the schizophrenia spectrum (M = 40.94, SD = 10.56) and mood with psychosis (M = 40.51, SD = 9.53) subgroups. In terms of education, those in the schizophrenia spectrum subgroup had completed fewer years of formal education (M = 7.74, SD = 3.22) than either of those in the other two subgroups. Both effect sizes for age and education were, however, very small (≤ .07).

Further, analysis showed a statistically significant difference for ethnicity and clinical subgroup membership, χ^2 (4, N = 134) = 3.55, p < .005. Defendants in the delusional subgroup were more likely to be Caucasian rather than African American or Hispanic. However, Caucasian ethnicity accounted for only a small part of group designation, phi (φ) = .163.

Table 7

Mean Comparisons of Three Clinical Groups

Group	Delusional	Schizophrenia	Mood w/ Psychosis	CI (upper, lower)
Demographic				
Age	45.85(9.95)*	40.94 (10.56)	40.51 (9.53)	40.71, 44.12
Education	11.54 (2.26)	7.74 (3.22)**	10.10 (2.19)	9.08, 10.27
Ethnicity[ab]				
African American	20.9 (9)	26.3 (15)	26.5 (9)	
Hispanic	16.3 (7)	49.1 (28)	35.3 (12)	
Caucasian	62.8 (27)**	24.6 (14)	38.2 (13)	
Legal Variables				
Custody to Admission	289.66 (208.67)	254.93 (155.57)	321.48 (183.75)	251.17, 313.54
LOS	107.20 (33.09)	117.48 (30.95)	110.94 (30.57)	107.34, 117.81
Prior Arrest/Conviction[a]	28.9 (26)	43.3 (39)	27.8 (25)	
Treatment Refusal[a]	89.1 (41)**	31.3 (26)	19.3 (16)	

[a] Proportion % (n); [b] n = 11 "Other" (dispersed across 5 different ethnic categories) were excluded; *$p \leq 0.05$, **$p \leq 0.005$, n = 141

Treatment

Psychotropic Treatment. The FMC formulary for antipsychotic medications comprises a wide range of both atypical and first generation agents, including newer medications such olanzapine, ziprazsdone, risperidone, quetiapine, aripirazole, and older first-generation antipsychotics such as haloperidol, fluphenazine, and perphenazine (Dr. Bryon Herbel, personal communication, 2015). At least 59.2% (n = 119) of defendants started a trial of antipsychotic medication (not including those treated with antidepressants, mood stabilizers, and antianxiety medications only), and 47.8% (n = 96) had at least one adequate antipsychotic drug trial within the single study period. Most defendants, around two thirds (67.2%), were treated with newer, atypical agents and there was no statistically significant difference (p = .706) for competency status (opined CST or IST) and type of antipsychotic agent (typical vs. atypical) after a 4-month treatment period.

Non-pharmacological Intervention. Data on CST group attendance or refusal was available for 116 cases and of these about 42% of defendants participated in the once weekly didactic group. The group is open-ended, runs on a seven week cycle, and includes an overview of the legal system, identifying and explaining the roles of court principals, the role of the defendant, working with counsel, basic legal vocabulary, and the trial process.

Treatment Refusal. More than half (52%) of the defendants in the current sample refused treatment with antipsychotic medication at some point during their initial 120 day CST restoration admission. This group of treatment refusers included outright refusals upon admission as well as those who would intermittently refuse, but later voluntarily

consent to treatment. Defendants have the right to and do refuse antipsychotic medication at any time during their competency restoration, and clinical presentations varied with corresponding periods of non-compliance and treatment refusal. Such disruptions in treatment did not necessarily prompt changes in the drug type administered, but were sometimes followed by renewed compliance and/or changes in the method of delivery. The majority of outright refusers were in the delusional subgroup (see Table 7).

Treatment refusal showed a statistically significant difference across the three subgroups, χ^2 (2, n = 143) = 27.044, p < .005. Delusional defendants refused treatment at some point during their 4-month CST restoration at higher rates compared to defendants in the schizophrenia spectrum and mood with psychosis subgroups. Only five of the forty-six DD defendants consented to treatment. Still, treatment refusal accounted for only a small part, phi (φ) = .189, of group membership.

Involuntary Medication and Sell Requests.

Prior to a request for involuntary treatment pursuant to *Sell* Due Process hearings under *Harper,* as required by the 5th United States Circuit Court, are conducted. Only seven (7) defendants were involuntarily medicated pursuant to *Harper*. These included instances where behavior stemming from treatment refusal or non-compliance with antipsychotic medication were a direct casual factor in the exacerbation of an existing medical condition; as well as cases where defendants exhibited persistent agitation rendering them a danger to themselves and/or those around them.

Involuntary medication can of course be administered on an emergent basis under circumstances of acute distress or to manage medical conditions associated with

substantial morbidity. However, when a defendant's mental illness does not preclude an ability to attend to his basic human needs of health and safety, i.e., falls short of the criteria for involuntary medication under the BOP administrative (*Harper*) guidelines 28 CRF 549 Section 43(a)(5) and 43(b), as determined by a hearing officer, the treatment team will petition the court for judicial oversight to permit the involuntary administration of psychotropic medication (if of course there is a likelihood of restoration) under *Sell*. Forensic examiners submitted a total of 61 *Sell* requests for the 109 cases opined IST after an initial four month treatment period, and the greater proportion 52.4% (n = 32) of these was for defendants in the delusional subgroup compared to the schizophrenia spectrum (26.2%) and mood with psychosis (13.1%) subgroups. Further follow up of these *Sell* requests revealed that 36.1% (n = 22) petitions were granted and 11.5% (n = 7) were denied, and for the majority of cases (52.5%, n = 32) the petition was left unaddressed by the court. Three cases in the latter category involved subsequent voluntary consent after the *Sell* submissions to the court while the rest (n = 29) were subsequently subject to an assessment of dangerousness pursuant to Title 18 USC §4246.

CST Restoration Outcomes

The number of defendants opined fit to proceed after a single, statutorily determined four (4) month restoration period was 46% (n = 91). In one case the CST opinion was left undetermined and two (2) other cases involved evaluations of competency other than to proceed to trial, i.e., competency to be sentenced and competency to understand the conditions of supervised release. Tables 8 provides data on differences between those restored and those opined not restored.

Rates of competency restoration and the receipt of treatment were statistically significant, χ^2 (1, n = 200) = 43.93, $p < .005$, phi (φ) = .469, showing that those treated with antipsychotic medication were much more likely to be opined restored at the end of the 4-month study. The proportion of defendants who underwent at least one therapeutically adequate trial of antipsychotic medication and were restored was 73.6% while the proportion of those not treated but restored was 26.4%. Comparably, 26.6% of defendants treated were found IST at the end of the 4-month study whereas 73.4% of those who went untreated were opined unfit to proceed.

Likelihood of Restorability. Federal statutes (as with most state statutes) require that forensic evaluators proffer an opinion regarding the likelihood of CST restoration, i.e., the substantial probability that a defendant will attain the capacity to proceed to trial in the foreseeable future given a period of evaluation and treatment. Such cases included, for example, instances where defendants evidenced slow but steady symptom relief pointing to a substantial likelihood of restoration in the foreseeable future given ongoing treatment. Under these types of circumstance, absent outright treatment refusal, forensic evaluators petitioned the court for an additional four months of treatment under Section 4241(d) of Title 18. For the vast majority of cases in the current study forensic evaluators opined that a defendant would likely be restored with ongoing and/or involuntary treatment. However, approximately 17% of defendants opined not restored after a single study were considered not likely to be restored by forensic examiners.

Restored and Non-Restored Defendants. There were no significant differences between restored and non-restored defendants on any of the demographic variables of age and education (see Table 8). Length of stay in the FMC was also not significantly different for the two groups. One legal variables, time in custody prior to admission, revealed that pretrial detainees who spent a longer time in custody before admission for CST restoration were more likely to be opined restored at the end of their initial 120 day study, $t(180) = 2.722$, $p = .007$. However, the variances between the two groups was significantly different from each other, $p = 0.04$ on Levene's test, thus negating the results of the *t*-test.

One clinical variable showed a statistically significant difference between restored and non-restored defendants, i.e., past psychiatric treatment and/or hospitalization, χ^2 (1, n = 184) = 4.164, $p = .041$, phi (φ) = .150. Defendants who were opined restored after the 120 day restoration period were less likely to have received past psychiatric treatment and/or hospitalization, precluding treatment related to the current index offense. Finally, the only other clinical variable approaching statistical significance at $p \leq .05$ was comorbidity ($p = .084$) suggesting that those without a comorbid condition were more less likely to be opined restored. However, comorbidity was treated as a dichotomous variable and no individual diagnostic categories were examined in the subsequent analysis.

Finally, most of the DD defendants were opined restored after the 120 day treatment period. However, the vast majority within this clinical subgroup refused treatment at some point during the course of their admission; consequently foregoing an

adequate treatment trial. Notably, only five DD defendants were voluntarily treated and of these three (60%) were restored within the statutory timeframe.

The proportion of pretrial defendants within the schizophrenia and mood disorder with psychosis subgroups who did not refuse treatment and were restored after the 4-month treatment period were 56% and 79% respectively. The preponderance of treatment refusal within the DD subgroup precludes any conclusions about the overall restorability of this group as well as any comparison of CST restoration rates across clinical subgroups.

Table 8

Study Variables and Competency Restoration Outcomes

Variable Group		*CST % (n)*	*IST % (n)*	*p*	CI
Demographic					
Age[a]		41.05 (11.02)	43.40 (10.34)	.12	-.64,5.32
Ethnicity				.53	
	African American	12.4 (23)	10.8 (20)		
	Hispanic	16.1 (30)	21.5 (40)		
	Caucasian	17.7 (33)	21.5 (40)		
Education[a]		9.80 (3.17)	9.63 (3.38)	.74	-1.24, .88
Relationship Status				.27	
	Unmarried	23.7 (36)	30.3 (46)		
	Married	5.9 (9)	3.3 (5)		
	Divorced	6.6 (10)	14.5 (22)		
	Separated	7.2 (11)	6.6 (10)		
Legal Variables					
Custody to FMC Admission[a]		332.39 (204.31)	256.76 (170.51)	.00**	-130.45, -20.81
LOS[a]		108.60 (31.21)	107.21 (36.55)	.77	-10.97, 8.19
Prior Arrest/Conviction		78.3 (54)	79.8 (67)	.82	
Violent Past Offense		51.8 (28)	46.3 (31)	.54	
Clinical Variables					
Comorbid Disorder		51.6 (47)	39.4% (43)	.08	
Prior Tx/Hosp.		73.3 (74)	59.0 (49)	.04*	

[a] Represents mean values (SD), *$p \leq .05$; **$p = 0.007$

Logistic regression analysis

To assess CST restoration status after a single (primary) study period those variables that reached significance in the preceding analysis of mean differences across groups were entered into the logistic regression. In all four variables comprised the logistic regression. The demographic variables of age and ethnicity were entered into the model given their statistical significance in prior research (Mossman, 2007; Rodenhauser & Khamis, 1988). In addition, the one clinical variable, i.e., comorbidity that approached statistical significance in the preceding analysis was also retained as a predictor along with one static predictor, i.e., prior treatment and/or hospitalization. Taken together, the variables in the model were age, ethnicity, comorbidity, and previous psychiatric treatment and/or hospitalization. Given the significant number of DD defendants who refused treatment in the current study clinical group could not be meaningfully applied as a predictor of competency restoration outcomes. Also, the legal variables of offense type and past criminal history were not included given the equivocal findings about their contributory value in previous empirical studies. Neither of the latter two variables reached statistical significance in this study..

Predictors were entered into the model in a single step and a test of the full model was statistically significant $\chi^2(5, N = 172) = 10.802$, $p = .05$ with a -2 Log Likelihood = 226.80. The model had an overall successful classification of 63.4%, and was able to classify 50.0% of those that were restored correctly and 75.0% of those opined IST.

Finally, an examination of the exponentiated values revealed that those defendants who had a history of past psychiatric treatment and/or hospitalization (excluding treatment while in custody for the current index offense) were more than

twice as likely, 2.05 (CI 1.02, 4.11), $p = .044$, to be opined unfit to proceed after the end of the primary (120 day) study period.

Table 9

Logistic Regression Results for Competency Status after an Initial 120 Day Restoration Period[1]

Predictor	B	S.E.	Wald	*df*	Sig.	Exp(B)	95% C.I. EXP(B) Lower	Upper
Age	-.024	.015	2.36	1	.124	.977	.948	1.006
Ethnicity[2]			1.587	2	.452			
Prior Psychiatric Treatment[2]	.718	.3564	4.075	1	.044*	2.050	1.021	4.116
Comorbidity	-.383	.321	1.425	1	.233	.682	.363	1.279

N = 172 (included in the analysis); Nagelkerke *R* = .081

[1] Not Restored = 0; Restored = 1

[2] Includes only African-American, Hispanic, and Caucasian

[3] Excludes any custodial psychiatric treatment for index offense

Chapter Five

Discussion

By some estimates, at any given time close to 10% of all the psychiatric beds across the entire United States are occupied by pretrial detainees referred for competency restoration (Mossman, 2007); a fact that should lend impetus for more research in this area. To date broader research on adjudicative competence has primarily focused on psychiatric diagnosis and psycholegal abilities after preliminary CST findings while data on CST restoration has been minimal. As a result existing knowledge about factors that predict successful restoration is not as robust as data on factors salient to initial competency status. The current study examined the restoration rates of delusional defendants after a single 4-months period of competency restoration and how this group of pretrial detainees compare to those with different psychotic symptoms.

Prevalence of Delusional Ideation and Salient Demographic Variables

Approximately 28% of the current sample had delusional ideation in the absence of other significant symptoms of psychopathology. However, it is important to stress that this number does not represent the prevalence of *delusional disorder* among defendants referred for CST restoration, but can be in part considered an artifact of case selection.

Notwithstanding, coding consistent with current nosological understanding (DSM-V, 2013) of delusional disorder suggests the inclusion of those cases with a single bizarre delusion, in the absence of hallucinations, disorganization, negative symptoms, affective disturbance, and psychomotor abnormality, would increase the overall number of cases in the DD group.

Establishing sound prevalence rates for delusions is difficult, not only because populations differ (psychiatric vs. forensic), but also due to variability in the assessment methods across studies. Nonetheless, the presence of delusional thought content across the entire sample of defendants does indicate that their occurrence is by no means uncommon. The current study is not only consistent with previous research highlighting the preponderance of persecutory content in delusional ideation (Herbel & Stelmach, 2007; Stompe et al., 1999), but also consistent with empirical studies showing the ratio between the two most common types of delusion, i.e., persecutory and grandiose delusions (Appelbaum, 1999).

A comparison of group means across demographic variables yielded two notable results. First, DD defendants were older than those in the other two subgroups. This finding appears consistent with existing perspectives about patients with delusional disorder going undetected within the public health system for longer periods compared their counterparts who suffer with other psychotic disturbances. That is of course until they have a run-in with the criminal justice system (Felthous et al., 2001).

The other result of note was the lower number of years spent in formal education by those defendants suffering with schizophrenia. Whereas the functional impairment associated with delusional disorder may be more circumscribed thereby resulting in less functional impairment within the community this results does suggest more pervasive dysfunction for those living with schizophrenia. Also, although this study did not investigate premorbid functioning meta-analytic data reporting prodromal cognitive deficits during adolescence for those subsequently diagnosed with schizophrenia has been documented (see for example Dickson, Laurens, Cullen, & Hodgins, 2012).

Delusional Preoccupation and Offense Behavior

As with prior research findings those defendants with persecutory ideation were more likely to have a stronger association between their delusions and pre-arrest behaviors. Previous studies have shown that persecutory delusions tend to have higher scores for *action* (as well as *negative affect*, a construct not investigated in this study), and this appears consistent with the present results given the predominance of delusional ideation for those in the DD group (Appelbaum et al., 1999).

Defendants in the DD group had higher *action* scores suggesting a greater association between their pre-arrest behavior and their concomitant delusional thinking. Notably, the current study designated threats to harm and/or kill as aggressive behaviors regardless of whether defendants actually acted on such threats. Again, those in the DD group were overrepresented in this offense category.

Previous studies have demonstrated that unlike schizophrenia and hallucinations on their own, delusions can have an independent association with violence (Swanson, Borum, Swartz, Monahan, 1996), and even more specifically, point to a link between persecutory delusions and violent conduct (Coid, Ullrich, Kallis, Keers, Barker et al., 2013). Although the current findings do not speak to DD defendants' propensity or motivation for violence the results do posit a link between aggressive offense behavior and delusional ideation. However, scholars in the area do point out that this relationship is complex and that delusions, along with underlying affective states such as anger, probably play a strong mediational role between violence and active psychosis (Coid et al., 2013; Junginger, 2006; Freeman, Garety, & Kuipers, 2001).

DD defendants also scored higher on ratings of *pervasiveness* suggesting their delusional convictions extend into a greater number of areas in their daily lives, but not necessarily legal problems. In fact some scholars contend that these individuals only tend to present for treatment after some confrontation with law enforcement (Felthous et al., 2001), and the fact that the mean age of the DD group was older than both the schizophrenia spectrum and mood with psychosis subgroup is in line with such a view.

Overall, the dimensional ratings of delusions yielded results in the expected directions. The delusional ideation of those in the DD group was more closely associated to their index offense and more prominent in their day to day lives compared with those in the schizophrenia spectrum and mood with psychosis group.

Competency Related Abilities and DD Defendants

Most competency related impairment upon admission were documented in some variant of *Dusky*. Even though there was not a sufficient amount of competency domains separately delineated to permit detailed analysis there were a number of cases documenting more specific psycholegal impairment. These cases were mostly in reference to a defendant's ability to disclose information to counsel or to relate to counsel. The composite variable formed from the two preceding domains suggested that DD defendants were more likely to have a disturbed interaction with counsel. Numerous scholars have pointed out how delusional convictions are often a harbinger for impairments in decisional capacity, and how subsequent efforts to counsel and/or medicate are subsumed under entrenched delusional beliefs (Felthous et al., 2001; Golding, 1995). Delusional convictions may impact a defendant's reasoning and actions

across a range of competency domains, however, the broad designations upon admission, of rational and factual understanding, and ability to relate to defense counsel as set out in *Dusky*, limited additional analysis CST domains.

LOS and Treatment Refusal

Time in Treatment. Length of stay for this study was defined as the first, uninterrupted 120 day competency restoration period. The fact that there was no significant difference between IST and CST defendants on this particular variable can be attributable to a number of factors. First, constraints on time and resources requires the process of competency restoration to be focused in order to maximize the likelihood of returning a defendant to court. Some studies suggests that most defendants are returned within six months and others in 90 days. The overall LOS, time from admission to CST restoration opinion, for the entire sample was not different for those opined restored compared to those found IST after 120 day study.

There is no singular determinative factor in competency restoration, and unsurprisingly the complexity of the process suggests that forensic evaluators will tend to maximize treatment options and calibrate interventions accordingly. All this takes time. As a result the minimal difference in the LOS for those opined restored and those who remained IST after an initial 120 day restoration period is to be expected.

As a variable LOS in the context of competency restoration is complicated, more especially for those defendants who are opined IST after a study. While in the custody of the AUSA these defendants are typically not remanded at the same facility once they conclude their statutorily determined 4-month treatment period. Even though there may

be exceptions, for example when there are foreseeable risks associated with transporting an inmate back to a county jail, most defendants leave the FMC to potentially return later depending on their psychiatric wellbeing and pretrial proceedings. The extraneous confounds resulting from such transfers, e.g., continued psychiatric treatment or the disruption/lack thereof, outside the FMC complicates any interpretation of 'time to restoration'. Also, the rates of treatment refusal for the current sample and how this behavior impacts time spent at the FMC cannot be discounted.

Treatment Refusal. Treatment with psychotropic medication is the principal component in successful competency restoration, and not surprisingly, most defendants (approximately three quarters) who completed at least one full trial of antipsychotic medication were opined restored, regardless of the type (older vs. atypical) of antipsychotic agent administered. On the opposite end, refusal of such treatment is strongly associated with nonrestoration, albeit that a few scholars have reported some counterintuitive findings (Rodenhauser & Khamis, 1988). Consistent with the majority of existing studies treatment refusal showed a statistically significant association with IST findings by forensic evaluators. Given such high rates of treatment refusal and concomitant disruptions in the competency restoration process it is not surprising that forensic evaluators routinely recommend ongoing involuntary medication for the remainder of a defendant's pretrial and trial proceedings subsequent to a *Sell* request.

In this study defendants gave a multitude of reasons for medication refusal ranging from the overtly psychotic ("you want to neutralize my blood"), to sarcasm ("you restore furniture, not people"), to symptomatic denial ("ain't shit wrong with me"), and to the seemingly rational ("I don't like the way it makes me feel"). This study further

demonstrates how complicated the competency restoration process can be since pretrial detainees who are psychotic retain the constitutional right to refuse forcible medication absent grave disability and/or dangerous behavior.

Psychotic Symptoms and Competency Restoration Outcomes

Past research has been equivocal on the factors salient to competency restoration. The greater proportion of the defendants in this study were not restored within a single 4-month treatment period, and the overall competency restoration rate in the current study was lower than that observed in previous research. A number of factors contribute to this finding. First, most defendants in the current sample were suffering with severe psychotic symptoms, and cases were selected on the basis of psychotic illness. In addition, the high rate of treatment refusal in the current study was strongly associated with findings of IST after a 120 day period of evaluation and treatment. However, the CST restoration rates for defendants who underwent at least one therapeutically adequate trial of antipsychotic medication was comparable with data reported in the extant literature, i.e., close to 75% of treated defendants are ultimately found fit to proceed.

This study utilized BPRS symptoms to group defendants in terms of their psychosis profile and exam CST restoration rates thereby adding to the growing body of research focusing on symptom presentation rather diagnostic classification. The current research makes inroads into some of the nine domains identified by Skeem et al (1998), specifically, delusions, hallucinations, thought disorder, impaired reasoning, and mood impairment. Identifying these deficits in delusional defendants adds to existing

knowledge about the treatability and restorability, albeit for a single initial restoration period, of this group of pretrial detainees.

The significant association between psychiatric drug administration and CST restoration has been well documented. Even though most DD defendants were opined unfit to proceed after the four month treatment period any comparisons of clinical groups with regard to restoration outcomes is potentially confounding given the preponderance of outright refusers in the DD subgroup. The current data contributes to our understanding of how a delusional defendant without significant thought or mood disturbance engages with treatment in a clinical-forensic setting, but any comparison with other clinical subgroups in terms of CST restoration is restricted..

Unlike the current study the empirical investigations by Herbel and Stelmach (2007) and later by Cochrane et al. (2012) regarding delusional defendants and restorability both report data on involuntarily treated DD defendants. Both these studies reported comparable CST restoration outcomes of around 75% for pretrial defendants who underwent adequate (forcible) medication trials. In this study the number of cases in the DD group who were voluntarily treated and restored was rather small to warrant any meaningful comparison with the two other clinical groups.

Consistent with previous findings (Wolber, 2008; Mossman, 2007; Anderson & Hewitt, 2002; Rodenhauser & Khamis, 1998) a history of prior psychiatric treatment was associated with findings of incompetence. This could point to the severity and chronicty of psychotic illness in those defendants found IST. Although this study did not assess the chronicity of psychotic illness the presence of this static variable does appear to be inversely related to positive CST outcomes.

As expected, DD defendants in the current sample also accounted for the bulk of the *Sell* requests submitted by evaluators. This study did not examine treatment outcomes subsequent to forcible medication. Consequently, the question of the restorability of DD defendants is not one that can be adequately answered by the current data. A number of factors determine whether or not a defendant who refuses treatment is medicated at some point during pretrial proceedings. For example, a seemingly more straightforward outcome is voluntary consent after initial refusal while at the other end of the spectrum a *Sell* request may be necessitated. Again, DD defendants outnumbered other pretrial detainees in terms *Sell* requests submitted to the court.

Although most defendants in the current study were not restored within the first 120 days of treatment more than 80% were opined restorable given ongoing or involuntary medication. Research suggest that forensic evaluators, consider factors associated with more favorable prognosis such as: a limited psychiatric history, good premorbid functioning, an absence of any comorbid disorders, and predominantly positive symptoms. Those cases where defendants were opined non-restorable included defendants who had at least three therapeutically adequate trials without clinically observable abatement in their psychiatric symptoms. Also, there were cases of defendants who became less combative after an adequate medication trial, but without much change in the intensity of their delusional ideation.

The threshold for involuntary medication as per *Harper* is quite high, and this conclusion is in part borne out in the small number of defendants (7) medicated pursuant to *Harper*, even in the face of such high rates of treatment refusal. However, the significant conceptual disorganization and/or intense agitation characteristic of the

behaviors of defendants who are medicated pursuant to *Harper* is inconsistent with a presentation of delusional disorder.

Limitations and Strengths

The present study is subject to a number of confounds and limitations common to archival data reviews. First, the clinical data coded with the BPRS was from clinicians' evaluations of defendants. However, existing research has demonstrated a relatively good rate of agreement (up to 75%) between forensic examiners about the presence of different psychiatric symptoms (Skeem et al., 1998), and the current research distinctly focused on symptoms rather than psychiatric diagnosis. In addition, there is empirical data reporting the use of the BPRS in archival research with good attendant estimates of interrater reliability (Adachi et al., 2000; Mullins et al., 1986).

Extensive data exists on the utilization of diagnostic categories and CST outcomes, and most studies point to the role of psychotic disorders and findings of IST. Zapf and Roesch (2011) have rightly argued that the oversimplification of the CST and overreliance on diagnostic categories limits more nuanced understanding. In an earlier work these same authors also point out that the base rate for competency restoration is high thereby according greater heuristic value to the identification of those cases with an equivocal or poor response to treatment (Zapf & Roesch, 2009). Unfortunately the high rates of treatment refusal by DD defendants in the current study limits any statistical comparison of CST restoration outcomes for different symptom profiles.

Also, examiner opinions served as a proxy for CST outcomes, but as past research has documented, agreement between examiners and judges about CST status is sufficiently high (Skeem, 1998).

Thirdly, this study examined data from a single federal institution within the Fifth Circuit, and the expected variability in 4241 (d) referrals and resultant outcomes across different federal jurisdictions may thus further limit the generalizability of the current findings.

The current study also has a number of strengths. First, it adds to the body of knowledge about a relatively understudied pretrial legal process. Given the resource intensive nature of competency restoration this study contributes to a more nuanced understanding of the restoration process thereby helping to focus treatment efforts in the context of variable symptom profiles.

More specifically, the widespread prevalence of delusional content across psychotic disorders is well documented. Insight as to how delusions, independent of other psychotic symptoms, present in the psycholegal context holds potentially important data for treatment planning when presented with delusional ideation in the absence of any other significant psychotic or affective disturbances. CBT, albeit in studies with rather small samples, has been shown to attenuate the convictions and actions associated with delusional beliefs as well as reduce the affective intensity with which such beliefs are held (O'Connor, 2007). However, securing the willingness of a pretrial defendant to participate in such (alternative) treatment would no doubt be challenging.

Finally, there is a paucity of data on treatment refusal rates for IST defendants undergoing restoration. This study provided data on a number of factors that have been

hitherto overlooked in the extant literature. Data from the current research suggests that these rates can be quite high, especially for defendants suffering with delusional ideation. Such treatment refusal included determined, outright rejection of antipsychotic medication upon admission as well as subsequent refusal once a course of treatment had been initiated. On the one hand these findings yield the anticipated results, i.e., a decreased probability of restoration for those left untreated with antipsychotic medication, but on the other hand they also open a window of insight into the type of pretrial detainee likely to refuse treatment.

Future Directions

As the body of research on competency restoration expands attention can turn even more closely to salient outcome variables. When the constitutional right of a defendant to refuse intrusive forcible medication is overridden the underlying processes driving such decisions require close investigation. The work by Herbal and Stelmach (2007) and Cochrane et al. (2012) provides valuable insight about the restorability of delusional pretrial defendants. One implication from the rates of treatment refusal in the current study means these results are not a direct extension of the aforementioned authors' work. Therefore, future studies can examine the data on *Sell* requests for delusional defendants using larger sample sizes, and moreover, the circumstances resulting in the denial or granting of *Sell* require more rigorous investigation, including those cases when *Sell* requests are altogether deferred by the court and 'superseded' by an order for custodial examination of dangerousness under Title 18 USC §4246.

In addition, the role of possible mediators in treatment responses requires closer scrutiny. To start, data on treatment refusal among pretrial detainees is sparse, and to regard refusal by delusional pretrial detainees as mere recalcitrance, likening them to their counterparts in the community, is somewhat simplistic. The extent to which their false beliefs are related to an index offense, concomitant anger, and whether they suffer mixed (more than one subtype) delusional ideas could all potentially mediate responses to treatment in the forensic setting.

Later research, using actual adjudicated competence after a period of restoration, needs to continue building on available data regarding the efficacy of different antipsychotic drugs, particularly for delusional defendants who undergo adequate, presumably involuntary (given high rates of symptomatic treatment refusal) medication trials.

Although no single study could cover the breadth of variables (and limit all confounds) associated with CST restoration future research would do well to track pretrial detainees who refuse treatment more comprehensively. This in turn would require IRB approval commensurate with the scope of such an undertaking.

As more standardized CST restoration protocols are developed across jurisdictions treatment can be matched more accurately to specific symptoms. Shifting a defendant's psycholegal state to where they can return to court in a reasonable time to confront their legal predicament is central to the process of competency restoration. Facts pertinent to each case for DD defendants will continue to determine respective outcomes, however, as our understanding about the efficacy of treatments for this group evolves those elements less relevant to successful outcomes should fall by the wayside.

Conclusion

Consistent with previous empirical findings the single variable identified in the current study to be most predictive of non-restoration was a history of prior psychiatric treatment and/or hospitalization. The current study and future research can help address the relative dearth of data for both CST restoration and the impact of delusional ideation within the forensic context. Alongside advances in psychotropic treatments restoration outcome studies can offer a more coherent and comprehensive data profile to the courts. The body of research on competency restoration will no doubt continue to grow and therewith our insight into the complexity of this clinical-forensic nexus.

Appendix A

Coding Structure

1. Study Case #: _____
2. Age at time of admission to FMC: _____
3. Race/Ethnicity: _____
4. Current employment: Yes/No / Employment by history _____
5. Education (yrs.)._____/Relationship status:_____
6. Prior Conviction: Yes/No Violent/Non-V.
7. Original index offense (adapted from Cochrane et al., 2012):

   1=Murder/Attempted Murder

   2=Sex Offense

   3=Assault

   4=Firearm(s)

   5=Robbery/Burglary

   6=Illegal Re-entry

   7=Substance related

   8=Fraud/Commercial

   9=Other: (specify) _____
8. Date first in custody for current charge: _____
9. Admission date to FMC: _____

10. Brief Psychiatric Rating Scale (BPRS)

Symptom	**N/A**	**1**	**2**	**3**	**4**	**5**	**6**	**7**
1. Somatic concern	N/A	1	2	3	4	5	6	7
		Somatic delusion						
2. Anxiety	N/A	1	2	3	4	5	6	7
3. Depression	N/A	1	2	3	4	5	6	7
4. Suicidality	N/A	1	2	3	4	5	6	7
5. Guilt	N/A	1	2	3	4	5	6	7
Guilt	N/A	Bizarre			Nonbizarre			
6. Hostility	N/A	1	2	3	4	5	6	7
7. Elated mood	N/A	1	2	3	4	5	6	7
8. Grandiosity	N/A	1	2	3	4	5	6	7
Grandiosity	N/A	Bizarre			Nonbizarre			
	N/A	Grandiose		Erotomanic		Mixed/Other		
9. Suspiciousness	N/A	1	2	3	4	5	6	7
Suspiciousness	N/A	Bizarre			Nonbizarre			
	N/A	Persecutory		Jealous		Mixed/Other		
10. Unusual thought content	N/A	1	2	3	4	5	6	7
11. Hallucinations	N/A	1	2	3	4	5	6	7
12. Bizarre behavior	N/A	1	2	3	4	5	6	7
13. Self-neglect	N/A	1	2	3	4	5	6	7
14. Disorientation	N/A	1	2	3	4	5	6	7
15. Conceptual disorganization	N/A	1	2	3	4	5	6	7
16. Blunted affect	N/A	1	2	3	4	5	6	7
17. Emotional withdrawal	N/A	1	2	3	4	5	6	7
18. Motor retardation	N/A	1	2	3	4	5	6	7
19. Tension	N/A	1	2	3	4	5	6	7
20. Uncooperativeness	N/A	1	2	3	4	5	6	7
21. Excitement	N/A	1	2	3	4	5	6	7
22. Distractibility	N/A	1	2	3	4	5	6	7
23. Motor hyperactivity	N/A	1	2	3	4	5	6	7
24. Mannerisms and posturing	N/A	1	2	3	4	5	6	7

11. Reason for initial CST evaluation:

    1=disruptive, bizarre behavior

    2= indicators of MI while in custody and/or documented history of MI

    3=suicidal behavior or history of such behavior

    4=uncooperative with counsel

    5=bizarreness of offense

    6=appears unkempt

    7=not specified (N/S)

12. Competency related ability impaired: (impaired)

    0=Capacity to participate in trial: (Yes/No)

    1= Capacity to testify relevantly: (Yes/No)

    2=Capacity to understand the adversary nature of proceedings: (Yes/No)

    3=Capacity to disclose relevant information to counsel: (Yes/No)

    4=Basic knowledge of legal strategies and options: (Yes/No)

    5=Relationship with counsel: (Yes/No)

    6=Capacity for reasoned choice among options: (Yes/No)

    7=Capacity to behave appropriately in court: (Yes/No)

    8= Capacity to appreciate charges: (Yes/No)

    9= Capacity to appreciate potential penalties: (Yes/No)

    10=Medication effects on CST: (Yes/No)

    11=Other (specify): _____

13. Previous psychiatric hospitalizations and/or treatment: (Yes/No)

    _____

14. Comorbid psychiatric disorders (after 120 days/first study):

    0=None

    1=Cognitive disorder

    2=Substance use disorder: [specify type(s)] _____

    3=Personality Disorder: (specify by name) _____

    4=Other disorder:(specify by name): _____

15. Delusional subtype:

    1=persecutory

    2=jealous

    3=grandiose

    4=erotomanic

    5=somatic

    6=mixed

16. Dimensional rating of delusions:

    16.1 Action:

    0=unrelated to index offense

    1=non-aggressive actions

    2=aggressive acts without injury to the victims

    3=aggressive acts with injury or use of weapon(s).

    16.2 Pervasiveness:

    0=not at all 1=some 2=numerous 3=virtually all

17. Hallucinations: (yes/no) _____

18. Type (e.g., auditory, tactile): _____

19. Antipsychotic medication(s): (yes/no) _____

19.1 Trial 1 - Specify name: _____

If discontinued specify if: N/C_____ Refusal_____ Side-effects_____

19.2 Trial 2 - Specify name: _____

If discontinued specify if: N/C_____ Refusal_____ Side-effects_____

19.3 Trial 3 - Specify name: _____

If discontinued specify if: N/C_____ Refusal_____ Side-effects_____

19.4 More than 3 - Specify name(s): _____

20. Other psychiatric medication(s): (specify name) _____

21. No. of psychotropic medication trials to restoration: _____

22. Participation in any non-pharmacological intervention: (yes/no) _____

Specify type if available: _____

23. Treatment refusal: (yes/no) _____

24. *Sell* authority requested: Yes No (Granted/Not Granted) _____

24.1 If *not granted*, list reason: _____

25. Was subject/defendant transferred from FMC after 1st study? Yes No

26. Date of CST opinion after first study:_____

27. CST opinion: 0=IST (not restored) 1=CST (restored)

Appendix B

§ 4241. Determination of Mental Competency to Stand Trial to undergo Postrelease Proceedings

(a) Motion To Determine Competency of Defendant.—At any time after the commencement of a prosecution for an offense and prior to the sentencing of the defendant, or at any time after the commencement of probation or supervised release and prior to the completion of the sentence, the defendant or the attorney for the Government may file a motion for a hearing to determine the mental competency of the defendant. The court shall grant the motion, or shall order such a hearing on its own motion, if there is reasonable cause to believe that the defendant may presently be suffering from a mental disease or defect rendering him mentally incompetent to the extent that he is unable to understand the nature and consequences of the proceedings against him or to assist properly in his defense.

(b) Psychiatric or Psychological Examination and Report.—Prior to the date of the hearing, the court may order that a psychiatric or psychological examination of the defendant be conducted, and that a psychiatric or psychological report be filed with the court, pursuant to the provisions of section 4247(b) and (c).

(c) Hearing.—the hearing shall be conducted pursuant to the provisions of section 4247(d).

(d) Determination and Disposition.—If, after the hearing, the court finds by a preponderance of the evidence that the defendant is presently suffering from a mental disease or defect rendering him mentally incompetent to the extent that he is unable to understand the nature and consequences of the proceedings against him or to assist

properly in his defense, the court shall commit the defendant to the custody of the Attorney General. The Attorney General shall hospitalize the defendant for treatment in a suitable facility—

(1) for such a reasonable period of time, not to exceed four months, as is necessary to determine whether there is a substantial probability that in the foreseeable future he will attain the capacity to permit the proceedings to go forward; and

(2) for an additional reasonable period of time until—

(A) his mental condition is so improved that trial may proceed, if the court finds that there is a substantial probability that within such additional period of time he will attain the capacity to permit the proceedings to go forward; or

(B) the pending charges against him are disposed of according to law;

whichever is earlier.

If, at the end of the time period specified, it is determined that the defendant's mental condition has not so improved as to permit the proceedings to go forward, the defendant is subject to the provisions of sections 4246 and 4248.

(e) Discharge.—When the director of the facility in which a defendant is hospitalized pursuant to subsection (d) determines that the defendant has recovered to such an extent that he is able to understand the nature and consequences of the proceedings against him and to assist properly in his defense, he shall promptly file a certificate to that effect with the clerk of the court that ordered the commitment. The

clerk shall send a copy of the certificate to the defendant's counsel and to the attorney for the Government. The court shall hold a hearing, conducted pursuant to the provisions of section 4247(d), to determine the competency of the defendant. If, after the hearing, the court finds by a preponderance of the evidence that the defendant has recovered to such an extent that he is able to understand the nature and consequences of the proceedings against him and to assist properly in his defense, the court shall order his immediate discharge from the facility in which he is hospitalized and shall set the date for trial or other proceedings. Upon discharge, the defendant is subject to the provisions of chapters 207 and 227.

(f) Admissibility of Finding of Competency.—A finding by the court that the defendant is mentally competent to stand trial shall not prejudice the defendant in raising the issue of his insanity as a defense to the offense charged, and shall not be admissible as evidence in a trial for the offense charged.

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